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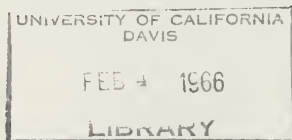
State of California  
THE RESOURCES AGENCY

Department of Water Resources

BULLETIN No. 130-63

# HYDROLOGIC DATA: 1963

## VOLUME III: CENTRAL COASTAL AREA



SEPTEMBER 1965

HUGO FISHER  
*Administrator*  
The Resources Agency

EDMUND G. BROWN  
*Governor*  
State of California

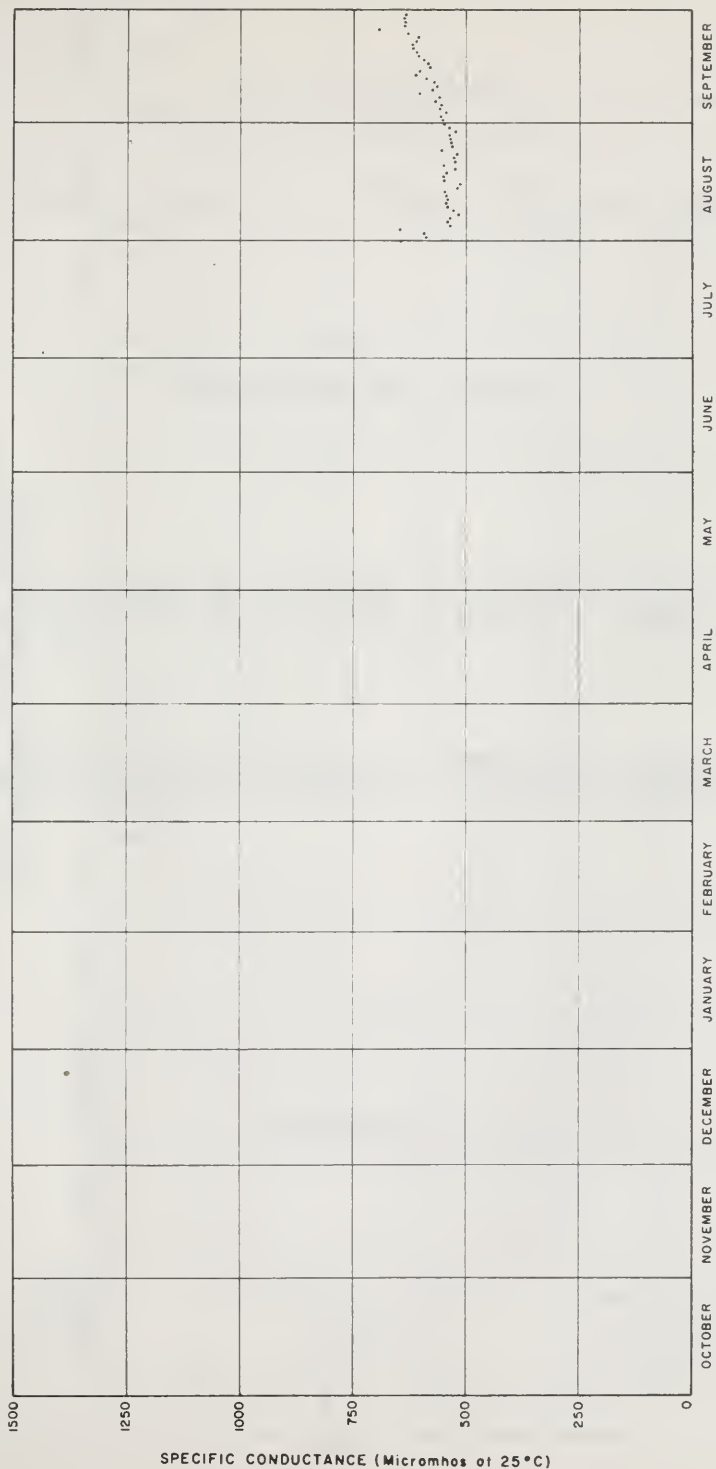
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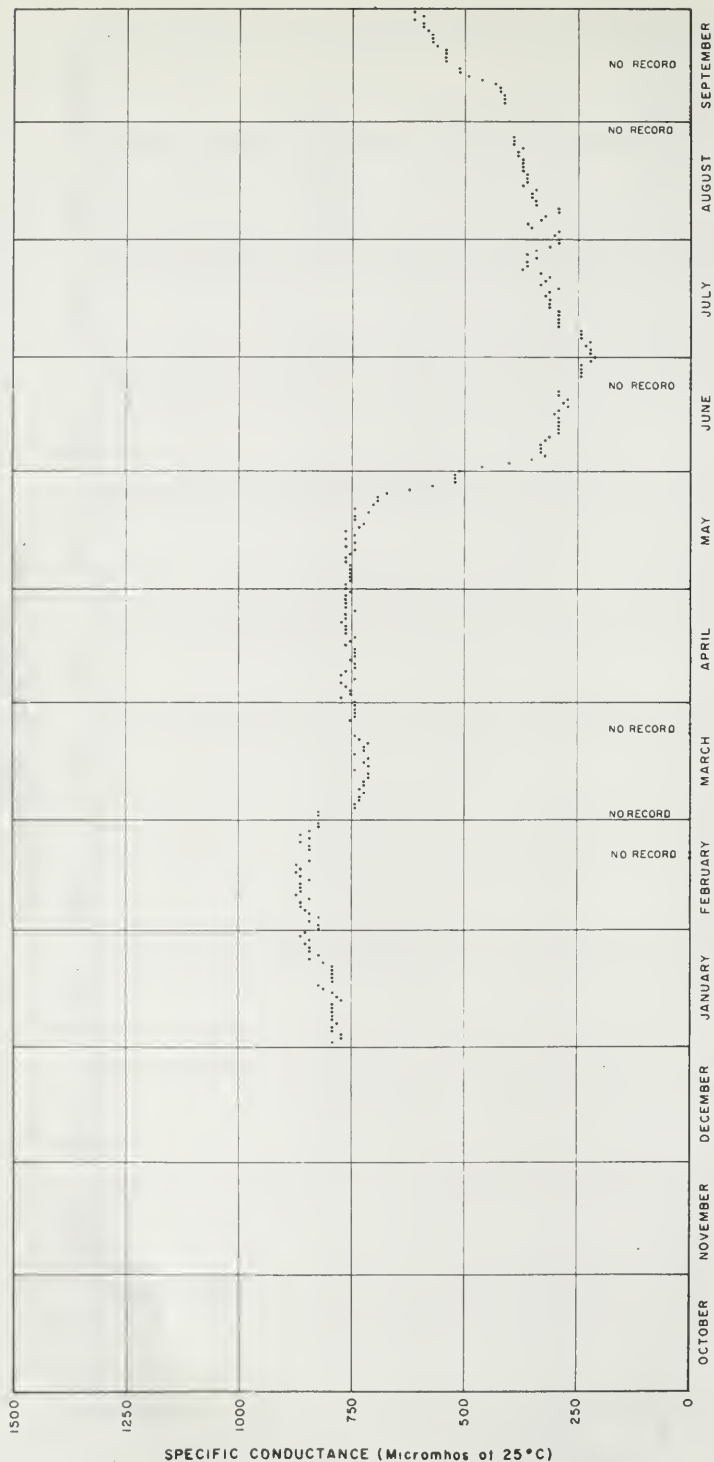
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FIGURE D-1



ELECTRICAL CONDUCTANCE  
DAILY MEAN  
ALAMEDA CREEK NEAR NILES (STA 73)  
1963

FIGURE D-2



State of California  
THE RESOURCES AGENCY  
Department of Water Resources

BULLETIN No. 130-63

HYDROLOGIC DATA: 1963

VOLUME III: CENTRAL COASTAL AREA

SEPTEMBER 1965

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*Administrator*  
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Department of Water Resources

ORGANIZATION OF BULLETIN NO. 130 SERIES

- Volume I - NORTH COASTAL AREA
- Volume II - NORTHEASTERN CALIFORNIA
- Volume III - CENTRAL COASTAL AREA
- Volume IV - SAN JOAQUIN VALLEY
- Volume V - SOUTHERN CALIFORNIA

Each volume consists of the following:

TEXT and

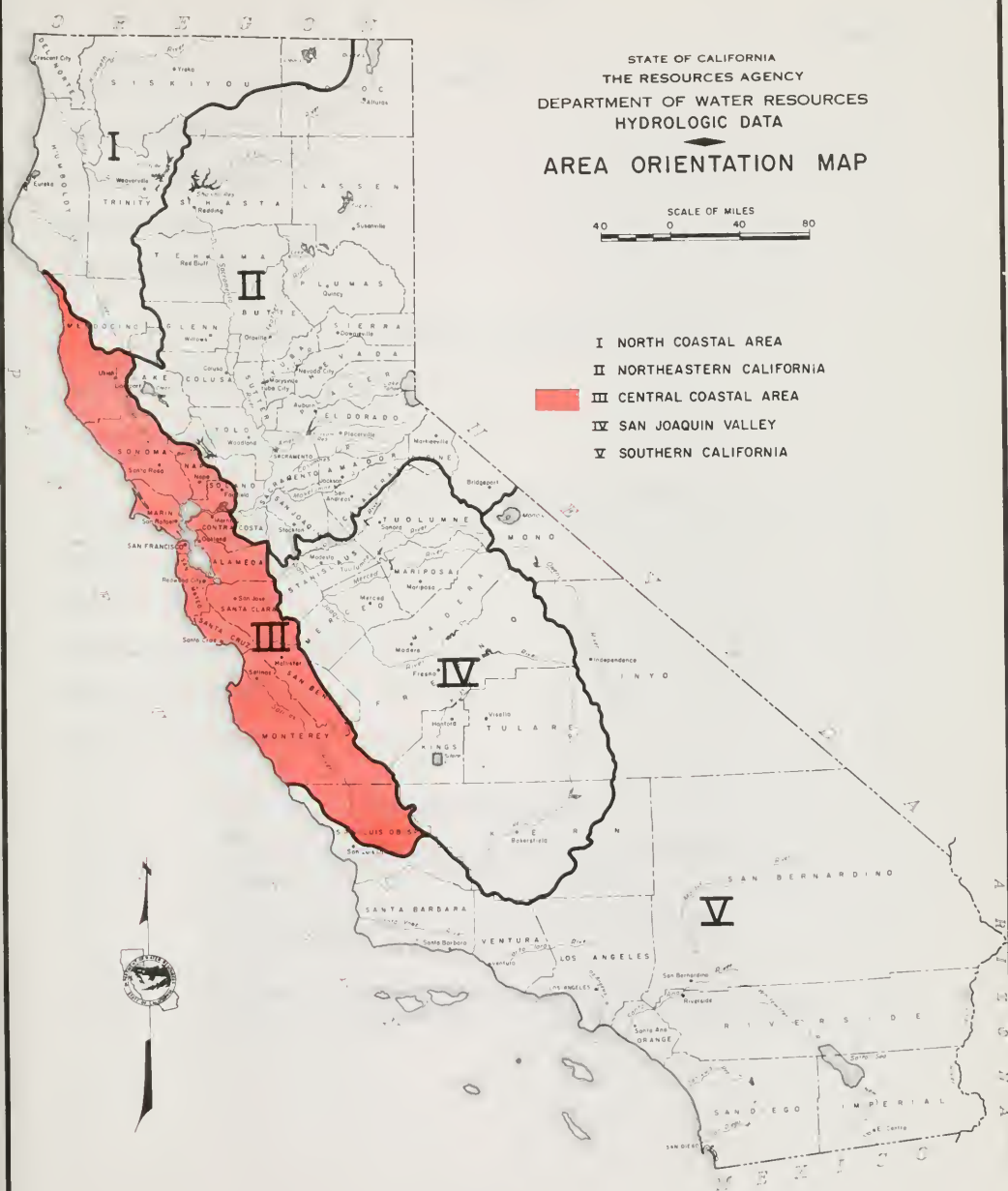
- Appendix A - CLIMATE
- Appendix B - SURFACE WATER FLOW
- Appendix C - GROUND WATER MEASUREMENTS
- Appendix D - SURFACE WATER QUALITY
- Appendix E - GROUND WATER QUALITY

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES  
HYDROLOGIC DATA

AREA ORIENTATION MAP

SCALE OF MILES  
40 0 40 80

- I NORTH COASTAL AREA
- II NORTHEASTERN CALIFORNIA
- III CENTRAL COASTAL AREA
- IV SAN JOAQUIN VALLEY
- V SOUTHERN CALIFORNIA







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Central Coastal Region
- 6 Status of Sea-Water Intrusion  
Santa Clara Valley East Bay Area
- 7 Climatological Stations in the Central Coastal Area

## ARTMENT OF WATER RESOURCES

OX 388  
MENTO

June 24, 1965

Honorable Edmund G. Brown, Governor,  
and Members of the Legislature of  
the State of California

Gentlemen:

The Bulletin No. 130 series of reports incorporates data on surface water, ground water, and climate previously published annually in Bulletins No. 23, 39, 65, 66, and 77. With the inauguration of the new series, publication of the earlier reports is suspended.

Bulletin No. 130 will be published annually in five volumes, each volume to report hydrologic data for one of five specific reporting areas of the State. The area orientation map on page iii delineates these areas. Page ii outlines the organization of the bulletin, its volumes and appendixes.

This report is Volume III, "Central Coastal Area". It includes a text which summarizes hydrologic conditions in this part of California during the 1963 water year (October 1, 1962 through September 30, 1963) and five appendixes of detailed hydrologic data: Appendix A, "Climate", Appendix B, "Surface Water Flow", Appendix C, "Ground Water Measurement", Appendix D, "Surface Water Quality", and Appendix E, "Ground Water Quality".

The collection and publication of data such as is contained in Bulletin No. 130 is authorized by Sections 225, 226, 229, 230, 232, 345, 12609, and 12616 of the Water Code of the State of California.

The basic data programs of the Department of Water Resources have been designed to supplement the activities of other agencies, in order to satisfy specific needs of this State. Bulletin No. 130 is designed to present useful, comprehensive, accurate, timely hydrologic data to the public.

Collection of much of the data presented has been possible only because of the generous assistance of other agencies, private organizations and individuals. Without the data supplied by these people, Bulletin No. 130-63 should have been much less the valuable tool it is today.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Wil E. Johnson". The signature is fluid and cursive, with a long horizontal stroke extending from the middle of the name.

Director

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES

EDMUND G. BROWN, Governor  
HUGO D. FISHER, Administrator, The Resources Agency  
WILLIAM E. WARNE, Director, Department of Water Resources  
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- - - - 0 - - - -

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Reviewed and coordinated by  
Division of Resources Planning  
Data Coordination Section

## ACKNOWLEDGMENTS

The Department of Water Resources gratefully acknowledges the assistance and contributions of the many public agencies, private organizations, and individuals whose cooperation greatly facilitated the preparation of this bulletin.

Special mention is made of the following agencies:

### Federal

United States Geological Survey  
United States Bureau of Reclamation  
United States Weather Bureau  
United States Public Health Service

### State

California Department of Public Health  
California Disaster Office

### Local

Alameda County Flood Control and  
Water Conservation District  
Alameda County Water District  
Campbell Water Company  
Cupertino, City of  
Gilroy, City of  
Mendocino County  
Monterey County Flood Control and  
Water Conservation District  
Mountain View, City of  
Napa County  
North Los Altos Water Company  
Pacheco Pass Water District  
Palo Alto, City of  
San Benito County  
San Jose Water Works

San Luis Obispo County Flood Control  
and Water Conservation District  
Santa Clara, City of  
Santa Clara County Flood Control and  
Water Conservation District  
Santa Clara Valley Water Conservation  
District  
Santa Cruz County  
Solano County  
Sonoma County Flood Control and Water  
Conservation District  
South Santa Clara Valley Water  
Conservation District  
Stanford University  
Sunnyvale, City of  
Watsonville, City of

CHAPTER I  
HYDROLOGIC CONDITIONS, 1962-63

California is an area that is unique in many respects. Its climate has always been exceptional and the range of land forms within the State sets it apart from neighboring areas. California has often been described as being set apart or isolated by features that prevail over wide areas adjoining the State. Perhaps, it would be more appropriate to consider the State as a link between dissimilar regions rather than isolated by them. California does, in fact, span all the dissimilarities of climate and topography from parched Death Valley to the marshy tidelands of the Pacific and the rain forests of northwestern California.

California climate is fostered by a balance between the slow forces of geology and the turbulent storms born of the Pacific Ocean. The massive walls of the Rocky Mountains and the Sierra Nevada protect the State from all but a few thrusts of the dry, cold, polar continental air masses. Maritime air masses, originating far out in the Pacific, receive some impetus and direction from wind patterns of the troposphere and move toward the California Coast. California lies in a transition zone between the prevailing westerlies that blow across the North Pacific and a calm high pressure zone, the horse latitudes, in the vicinity of 30 degrees north latitude. The horse latitudes, just south of California, buffer the State from many tropical storms which originate further to the south so that the north coast of California is crossed by more storms than the south coast. The Sierra Nevada and Cascade Mountains, along the eastern border of the great central valley, receive much of their precipitation by orographic lifting of the maritime air masses. The interior

lands of Southern California are shielded from maritime air masses by the Transverse Ranges and the northerly extension of the Peninsula Range.

#### California - Statewide

Average values, which sum up annual conditions for the whole State, show the 1962-63 water year to have been about normal. A closer look at this apparent normality shows a series of extreme conditions which in combination resulted in nearly normal averaged values. Figure 1, showing the water year precipitation in percent of normal, indicates that normal annual precipitation amounts were recorded in the latitude of San Luis Obispo and Bakersfield. Recorded annual precipitation south of that latitude was as low as 50 percent of normal in the vicinity of San Diego and north of the latitude rose as high as 150 percent of normal in the mountains along the northern boundary of the State.

During 1962-63, even these annual precipitation values were composed of extremes. In mid-October a series of storms drenched Northern California, Oregon, and Washington. Rivers in Northern California were near the flood level and the Feather River at Oroville reached the highest October stage of record, inundating construction work at the Oroville damsite. Southern California stayed dry. A midwinter drought followed, setting new records for lack of precipitation and for continuous days of fog in the Central Valley. Again, Southern California was dry.

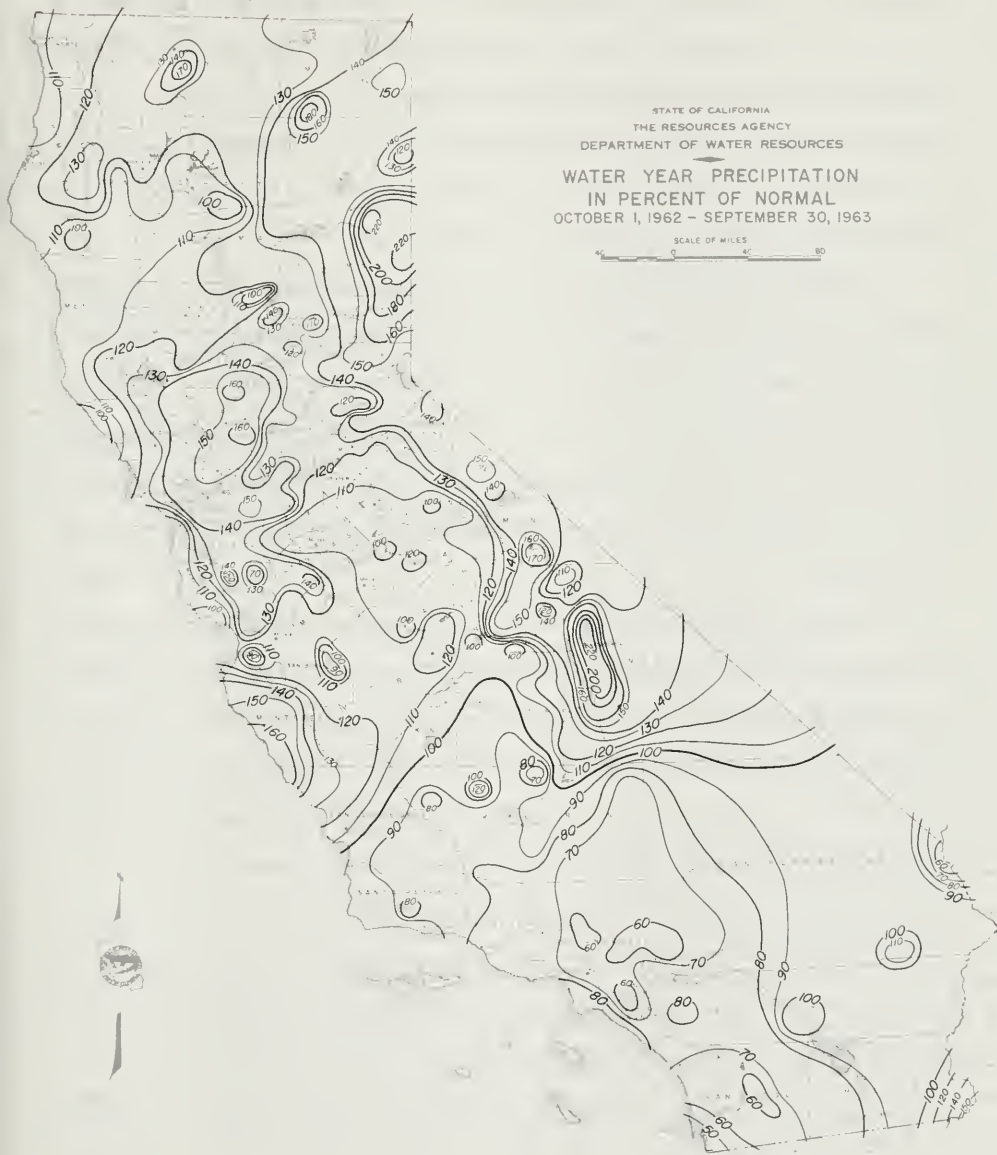
The drought was broken by a three-day downpour at the end of January. Flood conditions prevailed again in Northern California and some areas, particularly the upper Yuba River basin, suffered from serious floods. Much of Southern California received moderate amounts of rain at this time.



STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES

WATER YEAR PRECIPITATION  
IN PERCENT OF NORMAL  
OCTOBER 1, 1962 - SEPTEMBER 30, 1963

SCALE OF MILES  
0 40 80



During April, Northern California was covered by a series of storms; precipitation was moderate, but continued for almost two weeks. The April precipitation, along with a record late season snowfall during May, largely in the Northern Sierras, built up snowpacks and assured a normal water supply during the summer. Southern California gained some precipitation but had a less than normal wet season, which extended the dry trend that has prevailed in the southern part of the State since 1944.

Understandably, other hydrologic features showed abnormal responses. Streamflows alternated between extreme highs and extreme lows, but were about normal during the summer. With the recurring threat of floods, operation of reservoirs was difficult, yet the amount of water stored in reservoirs at the end of the water year was greater than year-end storage during most preceding years. In Southern California both surface runoff and reservoir storage were below normal.

Ground water conditions followed the pattern of precipitation. In the northern part of the State, the amount of water stored in the ground water basins generally increased. Because of the time distribution of precipitation, the increase of stored ground water was less than it would have been if the distribution was more uniform. Throughout Southern California, where precipitation was well below normal, ground water levels continued to drop.

#### Central Coastal Area

The Central Coastal Area, as delineated on the "Area Orientation Map", (frontispiece) includes all or parts of 14 counties extending from San Luis Obispo County on the south to Mendocino County on the north. Nearly half of the State's 1,190-mile open coastline is within the report area. It embraces

the major portion of the Coast Ranges, which consists of a series of mountain ranges paralleling the coast separated by many fertile valleys. The San Francisco Bay system is a central and unique feature.

Within the area is the metropolitan complex known as the Bay area. The Bay area is the second largest metropolitan area in the western half of the United States.

Surface water in the southern and central portions of the Central Coastal Area is highly developed. Extensive use is made of the numerous complex ground water basins and surface water is imported to the area. Several local ground water basins are deliberately recharged with stored or imported surface water. The basins are highly important to local economies and to the economy of the State. Consequently, ground water is emphasized in this **bulletin**.

In the Central Coastal Area average annual precipitation varies from areas of abundant rainfall along the coast and in the region north of San Francisco (up to 80 inches) to areas of very little rainfall in the southern Salinas River Valley (as low as 10 inches). During the 1962-63 season, which was noteworthy for its excesses in wet and dry periods, the final average result was an above normal precipitation for the report area with some areas recording 160 percent of normal.

The quality of surface waters in the report area is mostly good with the best waters draining the mountains adjacent to the coast. During the 1962-63 season the concentrations of dissolved solids generally decreased because of above normal precipitation and the corresponding increase in runoff.

Ground water occurs under diverse conditions and in a variety of rock types. Most of the readily available water exists in subsurface reservoirs composed of unconsolidated alluvial materials which underlie intermontane

valley floor areas. In many areas, the unconsolidated alluvial deposits are underlain and bordered by relatively extensive deposits of older, more consolidated alluvial materials which are also water bearing and act as recharge areas for the ground water reservoirs. Materials of lesser importance with respect to production of ground water in the Central Coastal Area but often of local significance are: The sedimentary materials which were deposited in lakes, lagoons, or as sand dunes; shallow water marine sediments from which sea water has been flushed; and some types of volcanic rocks. The ground waters are good to excellent in mineral quality and are suitable for most beneficial uses, except in localized areas where waters contain high concentrations of one or more of the following minerals: chlorides, sulfates, nitrates, sodium, and boron. The ground waters are bicarbonate and vary from moderately hard to very hard. Depths to water in wells range from about 350 feet to "flowing".

The raw ground water level data are made more meaningful when summarized into basin averages. Table 1, "Ground Water Level Conditions in the Central Coastal Area", presents average depths to ground waters and average changes by basin and region from the spring of 1962 to the spring of 1963.

During the spring of 1963 average depths to water in the monitored basins ranged from about 4.5 feet in Alexander Valley to about 123 feet in the Santa Clara Valley. The overall average depth to water in the basins monitored was 50.6 feet which was a decrease of 2.7 feet from the 1962 average. Significant rises of 23.4 feet and 2.0 feet occurred in the South Santa Clara County and San Benito County units of Gilroy-Hollister Valley, respectively. These rises were reversals of downward trends of the previous three years during which water levels had dropped approximately 39 feet in South Santa Clara

TABLE 1  
GROUND WATER LEVEL CONDITIONS  
IN THE CENTRAL COASTAL AREA  
SPRING 1963

Ground Water Basin or Unit	Basin Number	Average Change in Ground Water Level $\frac{1}{}$ : Spring 1962 to Spring 1963 (in feet):	Average Depth to Ground Water Spring 1963 (in feet)
Region 1			
Potter Valley	1-14.00	0.0	6.6
Ukiah Valley	1-15.00	-1.1	5.7
Sanel Valley	1-16.00	-0.6	5.3
Alexander Valley	1-17.00	+0.6	4.5
Santa Rosa Valley	1-18.00		
Santa Rosa Area	1-18.01	+2.3	13.0
Healdsburg Area	1-18.02	-0.2	12.5
Lower Russian River Valley	1-98.00	-2.4	9.4
Region 1 Averages: $\frac{2}{}$		-0.6	9.6
Region 2			
Petaluma Valley	2-1.00	+1.3	23.2
Napa-Sonoma Valley	2-2.00		
Napa Valley	2-2.01	+0.9	12.0
Sonoma Valley	2-2.02	+1.1	16.5
Suisun-Fairfield Valley	2-3.00	+5.3	6.8
Ygnacio Valley	2-6.00	+1.1	15.1
Santa Clara Valley	2-9.00		
East Bay Area	2-9.01	+2.6	59.3
South Bay Area	2-9.02	+12.6	123.2
Livermore Valley	2-10.00	+3.3	63.5
Half Moon Bay Terrace	2-22.00	+3.4	18.7
San Gregorio Valley	2-24.00	-0.6	9.1
Pescadero Valley	2-26.00	+1.4	6.1
Region 2 Averages: $\frac{2}{}$		+5.5	53.3
Region 3			
Soquel Valley	3-1.00	-0.8	65.6
Pajaro Valley	3-2.00	+2.2	60.7
Gilroy-Hollister Valley	3-3.00		
South Santa Clara County	3-3.01	+23.4	47.3
San Benito County	3-3.02	+2.0	76.9
Salinas Valley	3-4.00	+0.1	55.2
Carmel Valley	3-7.00	+0.7	16.3
West Santa Cruz Terrace	3-26.00	No measurements in 1963	
Region 3 Averages: $\frac{2}{}$		+1.5	56.9
Central Coastal Area Averages: $\frac{3}{}$		+2.7	50.6

$\frac{1}{}$  + indicates rise in water level.  
- indicates decline in water level.

$\frac{2}{}$  Region Averages =  $\frac{\sum (\text{basin average} \times \text{basin area})}{\sum \text{basin areas}}$

$\frac{3}{}$  Central Coastal Area Averages =  $\frac{\sum (\text{region average} \times \text{region area})}{\sum \text{region areas}}$

County and 9 feet in San Benito County. Sea-water intrusion continued to be a problem in portions of Salinas and Pajaro Valleys and in the Niles Cone in Alameda County where ground water levels have remained below sea level.

During the period from July 1, 1962 through June 30, 1963, there were no significant changes in mineral concentrations. Some localized poor quality ground water, probably from deep-seated origin, is found in the northern portion of the Central Coastal Area. Data collected in portions of Petaluma Valley, Napa-Sonoma Valley and Suisun-Fairfield Valley, where ground water has been degraded by brackish waters from the bays, indicate no further degradation. Chloride concentrations in the Centerville aquifer in Alameda County decreased (Plate 6). This decrease was probably a direct result of above normal precipitation and deliberate recharge of the ground water basin with South Bay Aqueduct water by Alameda County Water District.

Boron concentrations in excess of that recommended for irrigation of some crops were present in water from some wells in the following areas:

1. The vicinity of Newark in Alameda County and the proximity of the Mission fault.
2. Southern and central portions of Petaluma Valley adjacent to Petaluma Creek.
3. East side of Napa Valley.
4. Eastern portion of Santa Clara Valley, especially in the Penitencia Creek area.
5. Northern and eastern portions of Livermore Valley.
6. Eastern portion of Hollister Valley.

A number of wells drilled into the volcanic rocks on the east side of Napa Valley produce highly mineralized water, or water having undesirable

taste or odor. High nitrate concentrations occur in localized areas in Livermore Valley. Many wells in Clayton and Ygnacio Valleys yield water which, unless softened, is undesirable for domestic and some industrial uses because of extreme hardness. Some of the wells in Ygnacio Valley also yield water having concentrations of sulfates and nitrates exceeding amounts normally recommended as limits for drinking water.

Ground water samples collected in the sea-water intruded areas of Pajaro and Salinas Valleys contained about the same chloride concentrations as the samples collected the previous year. Water with nitrate concentrations above the normally recommended limit for drinking water is present in a few wells located near Monterey Bay in Pajaro Valley. Wells in the vicinity of Hollister yield water containing high concentrations of total dissolved solids, chlorides, sulfates, nitrates, and boron.



## CHAPTER II

### DATA COLLECTION ACTIVITIES

The Department of Water Resources, in cooperation with federal, state, and local agencies, as well as with the generous and public-spirited assistance of many individuals, has gradually developed a continuing program of basic hydrologic data collection. This continuity enables systematic and orderly handling, filing, and publication of the data for all uses both now and in the future.

The data collection activities involve the maintenance of a network of stations adequate to provide reliable, meaningful, representative and needed information. Water samples or water measurements are taken at these stations, chemical analyses of the samples are made, and the data are compiled, analyzed, summarized, and published. These data include information on climate, surface water flows, tidal stages, ground water levels, and on the chemical quality of surface and ground waters. The climate data include precipitation, air temperature, wind movement, and evaporation.

#### CLIMATE

The climatology station network shown on Plate 7, "Climatological Stations in the Central Coastal Area", was established by the U. S. Weather Bureau and the Department of Water Resources. The Department supplements the Weather Bureau network of 141 stations with a network of 74 selected stations which are and have been operated by individuals, private industry, and governmental agencies. Data from these 215 stations are tabulated in Appendix A of this report.



### SURFACE WATER FLOW

The four surface water stations shown on Plate 1 are operated by the Department of Water Resources. The Department also cooperates with the United States Geological Survey in the operation of 62 of the 115 stations operated by that agency in the area covered by this report. Also, the United States Coast and Geodetic Survey operates two tide stations in the area. The United States Geological Survey publishes data from the 115 stations in its water supply papers. There are a number of surface water stations operated by local agencies for local purposes from which data are not routinely obtained by the Department.

### GROUND WATER MEASUREMENT

The Department cooperates with the U. S. Geological Survey and many local agencies for the systematic observation of ground water levels. Wells at which water level measurements are made in the Central Coastal Area number approximately 1,700 of which 213 are presented in Appendix C of this report. These 213 wells were selected as representative of wells in the respective ground water basins or units. The wells were selected on the basis of a number of factors such as, geographical density of one or two wells per township; length of water level record; frequency of measurements; conformity with respect to water level fluctuations in the ground water basin or area, aquifer represented; and availability of a geologic log, mineral analyses, and production records.

The depth to water in most wells is usually a direct measurement made with a tape; however, in some wells, especially deep ones, measurements are made

with an air line and gauge or an electric sounder. Field work was performed by local cooperators, the U. S. Geological Survey, and department personnel. The Department has full responsibility for reviewing, editing, processing, and publishing ground water level data. An electronic computer program has been developed to perform a part of the processing and tabulating.

Ground water basins or units in the Central Coastal Area are shown on Plate 2. The number of wells measured in these areas and the measuring agency are shown in Table 2.

Water level fluctuations are depicted graphically on hydrographs of 22 wells distributed among significant basins of the Area. These wells were selected insofar as possible as representative of their respective basins or units. The hydrographs are presented in Plates 3 through 5 by region, basin, and well number.

Maps showing lines of equal elevation of water in wells in Napa Valley, Suisun-Fairfield Valley, Livermore Valley, Santa Clara Valley (East Bay and South Bay Areas), Gilroy-Hollister Valley (South Santa Clara and San Benito Counties), Salinas Valley and Pajaro Valley are prepared regularly. These maps are on file with the Department.

#### SURFACE WATER QUALITY

Surface water was sampled and analyzed both by the Department of Water Resources and by the U. S. Geological Survey in cooperation with the Department. The data from these sampling activities are shown in Appendix D of this report. The appendix includes data from a network of basic monitoring stations, operational stations on the South Bay Aqueduct, and investigational stations. It includes all of the surface water quality data collected by this

TABLE 2  
SUMMARY OF GROUND WATER DATA  
COLLECTED IN THE CENTRAL COASTAL AREA  
July 1, 1962 - June 30, 1963

Ground Water Basin or Unit	Basin Number	Measuring or Sampling Agency	Number of Wells	
			Measured	Sampled
REGION 1				
Potter Valley	1-14.00	U. S. Geological Survey	2	
Ukiah Valley	1-15.00	U. S. Geological Survey Mendocino County	3	10
Sacel Valley	1-16.00	U. S. Geological Survey Mendocino County	3	6
Alexander Valley	1-17.00	U. S. Geological Survey Department of Water Resources	6	6
Santa Rosa Valley	1-18.00			
Santa Rosa Area	1-18.01	U. S. Geological Survey	3	
		Department of Water Resources	7	20
	1-18.02	U. S. Geological Survey Department of Water Resources	4	3
Lower Russian River Valley	1-98.00	U. S. Geological Survey	3	
REGION 2				
Petaluma Valley	2-1.00	U. S. Geological Survey Sonoma County F. C. & W. C. D. Department of Water Resources	3 3	17 9
Napa-Sonoma Valley	2-2.00			
Napa Valley	2-2.01	U. S. Geological Survey Napa County Department of Water Resources	4 108	27
Sonoma Valley	2-2.02	U. S. Geological Survey Sonoma County F. C. & W. C. D. Department of Water Resources	2 2	14
Suisun-Fairfield Valley	2-3.00	U. S. Geological Survey Solano County Department of Water Resources	3 23 4	15
Pittsburg Plain	2-4.00	Department of Water Resources		3
Clayton Valley	2-5.00	Department of Water Resources		8
Ygnacio Valley	2-6.00	Department of Water Resources	5	7
Santa Clara Valley	2-9.00			
East Bay Area	2-9.01	Alameda County Water District Alameda County F. C. & W. C. D. Department of Water Resources	105 88 3	46 24
South Bay Area	2-9.02	U. S. Geological Survey Santa Clara Valley W. C. D.	3 250	20
Livermore Valley	2-10.00	Alameda County F. C. & W. C. D.	160	30
Half Moon Bay Terrace	2-22.00	Department of Water Resources	9	
San Gregorio Valley	2-24.00	Department of Water Resources	5	
Pescadero Valley	2-26.00	Department of Water Resources	7	
REGION 3				
West Santa Cruz Terrace	3-26.00	Santa Cruz County	7	
Soquel Valley	3-1.00	Santa Cruz County Department of Water Resources	5 2	
Pajaro Valley	3-2.00	Monterey County F. C. & W. C. D. Santa Cruz County City of Watsonville Department of Water Resources	25 50 6 13	14 17
Gilroy-Hollister Valley	3-3.00			
South Santa Clara County	3-3.01	South Santa Clara County W. C. D. Santa Clara Valley W. C. D. Department of Water Resources City of Gilroy	25 16 17 4	11
San Benito County	3-3.02	Pacheco Pass Water District and San Benito County Department of Water Resources	90 3	14
Salinas Valley	3-4.00	Monterey County F. C. & W. C. D. San Luis Obispo County	393 51	70 6
Carmel Valley	3-7.00	Monterey County F. C. & W. C. D.	33	5

1/ An additional 110 wells were measured during spring 1963.

Department in the Central Coastal Area, except for data from investigational stations in the San Francisco Bay system below Antioch. The excluded data are specialized in nature and beyond the scope of this report. The stations for which data are reported in Appendix D are shown on Plate 1.

#### GROUND WATER QUALITY

During the year from July 1, 1962 through June 30, 1963, ground water samples were collected from 393 wells in the Central Coastal Area. These wells or stations were selected by the Department in the areas shown on Plate 2. Table 2 indicates the number of wells sampled in each basin and the sampling agency. The data from these stations are tabulated in Appendix E.

Ground water is sampled and analyzed to provide information on the quality characteristics, to identify problem areas, to determine the quality trends, and if possible, to identify the factors that control or affect the quality. Analyses made of ground water include mineral and radiological determinations. The frequency of sampling, types of analyses, and density of the station network depend largely on conditions in the monitored area.

## APPENDIX A

### CLIMATE



## CLIMATOLOGIC DATA

This appendix contains station index, seasonal precipitation, monthly temperatures, and monthly evaporation tables. The data compiled are provided by governmental agencies, private industry and individuals. Symbols and abbreviations used in this appendix are:

C	Data from recorder stations.
D	Data unavailable for this report.
E	Evaporation.
e	Wholly or partially estimated.
M	All or part of record missing. When used in place of an average monthly temperature value, more than 10 days of record are missing.
NR	No record.
P	Precipitation.
RB	Beginning of record.
SS	Observation at sunset.
T	Temperature.
T	Trace, an amount too small to measure.
V	Observation time varied.

### Climatological Station Index

Table A-1 includes the station name, number, and the county in which each station is located. The letter and first digit of the station number represent hydrographic area and unit. The remaining digits are assigned in accordance with alphabetic sequence. It also includes the observer's name, station location, and elevation of the station. The time of observation, beginning of record, and cooperator number complete the information on this

table. The cooperator number indicates the source of the data. The cooperator numbers assigned are as follows:

000	Private Cooperator
403	Sonoma County Flood Control and Water Conservation District
407	San Benito County
411	Marin County
413	Marin Municipal Water District
414	Santa Clara Valley Water Conservation District
418	Vallejo Water Department
426	Santa Clara County Flood Control and Water Conservation District
801	Pomology Department, U. C., Davis
804	State Department of Beaches and Parks
806	State Department of Water Resources
808	State Division of Forestry
809	State Division of Highways
900	U. S. Weather Bureau
901	Corps of Engineers, San Francisco District
902	U. S. Air Force
907	State Climatologist (unpublished USWB)
909	U. S. Soil Conservation Service

#### Seasonal Precipitation

Table A-2 presents total monthly and annual precipitation in inches for the year from July 1, 1962 through June 30, 1963.



### Monthly Temperatures

Table A-3 covers the same period and includes the maximum and minimum temperatures, the average of the daily maximum temperatures, the average of the daily minimum temperatures, and the average of the daily maximum and minimum temperatures recorded during the month. The temperatures are recorded in degrees Fahrenheit.

### Monthly Evaporation

Table A-4 presents total evaporation during each month in inches, total wind movement during the month in miles, the monthly average of daily maximum and minimum water temperatures, monthly precipitation, the maximum air temperature, the minimum air temperature, the average minimum air temperature, and the average of the daily maximum and minimum air temperatures. Portions of these data are repetitions of data in Tables A-2 and A-3. These data are included herein because of their close connection with evaporation data.



# TABLE A-1 CLIMATOLOGICAL STATION INDEX

STATION NAME	STA NUMBER	COUNTY	OBSERVER	LATITUDE			LONGITUDE			ELEV IN FEET	TOWNSHIP RANGE	SECTION 40 ACRES TRACT	TIME OF OBSERVATION			RECORD BEGAN	COOP. NO.
				° ' "	° ' "	° ' "	° ' "	° ' "	° ' "				P	T	E		
Alamitos Perc. Pond	E6 0053	Santa Clara	SCVWD	37 15 18	145 52 18		200	85 18	9 P		9A	9A	9A			1959	426
Alamo 0064	E6 0064	Contra Costa	Quartzell	37 52	122 01	410	15 2W	1 Q			7A	7A				1957	900
Almaden Reservoir	E6 0125	Santa Clara	SCVWD	37 10 00	121 50 00		640	95 18	11 E		8A					1936	426
Angvie Pac. Union Col.	E6 0212	Napa	Pacific Union Col.	38 34 18	122 26 12		1815	8N 3W	5 Q		8P	8P				1939	900
Arroyo Seco	D2 0322	Monterey	R. Billings	36 14	121 29		800	19S 4E	36 Q		C					1931	900
Atascadero RMS	03 0360-01	San Luis Obispo	J. Ellis	35 27 30	120 38 24		940	28S 12E	26		8A	8A				1948	809
Atlas Road	E6 0372	Napa	C. Dutrie	38 25	122 15		1735	7N 4W	25 C		C					1940	900
Ben Lomond	D0 0674	Santa Cruz	N. Shaw	37 05	122 06		504	10S 2W	9		5P	5P				1937	900
Berkeley	E6 0653	Alameda	U. of Calif.	37 52	122 15		799	15 3W			C	8P				1887	900
Berrysessa IE (Toyon Ave.)	E6 0706	Santa Clara	H. Mitchell	37 23	121 50		205	6S 1E	23 P		5P					1921	901
Big Sur State Park	D4 0790	Monterey	Park Ser.	36 15	121 47		340	19S 2E	30		8A					1914	900
Black Mountain 2 SW	E6 0850	Santa Clara	M. Incepi	37 18	122 10		2330	7S 3W	36		9A					1943	900
Blake Landing	F9 0876	Napa	H. Angrea	38 11 42	122 55 00		40	4N 10W	13		8A					1956	000
Boonville RMS	F8 0973	Mendocino	Div. of Highways	39 01	123 22		342	13N 14W	2		9A					1936	900
Boonville-Farrer	F8 0973-02	Mendocino	J. Farrer	39 00 45	123 22 10		395	13N 14W	2		8A					1951	901
Boonville-Bell Valley	F8 0973-D4	Mendocino	E. Mathieson	39 01 30	123 17 30		1580	14N 13W	33		5P					1960	000
Bouchers Gap	D4 0998-27	Monterey	B. Alexander	36 21	121 51		2050	18S 1E	24 P		8A					1960	000
Bradley	D3 1034	Monterey	Div. of Forestry	35 52	121 44		540	24S 11E	8		5P					1957	900
Buena Vista	D1 1170	San Benito	A. Churchill	36 44	121 11		1640	13S 7E	27 R		C					1932	900
Burlingame	E7 1206	San Mateo	Burlingame	37 35	122 21		10	4S 5W			4P	4P	4P			1946	900
Burton Ranch	E6 1216	Contra Costa	R. Stinton	37 52	122 05		530	15 2W	9 M		8A					1955	900
Buzard Lagoon	D1 1247	Santa Cruz	N. Nordren	37 02	121 50		1275	10S 1E	26 M		6P					1959	000
Calaveras Reservoir	E5 1281	Alameda	O. McCarthy	37 29 12	121 49 06		805	5S 1E	24 A		7A					1874	900
Calero Reservoir	E6 1282	Santa Clara	SCVWD	37 10 48	122 45 48		500	9S 2E	4 E		8A					1958	414
Calistoga	E6 1312	Napa	J. Schou	38 35	122 35		365	9N 7W	36		7A					1873	900
Cambrian Park	E6 1341-10	Santa Clara	SCVWD	37 15 12	121 55 24		225	8S 1W	12 E		7A					1962	414
Campbell Water Cu	E6 1377-01	Santa Clara	Campbell Water Co.	37 19	121 57		192	7S 1W	35 C		5P					1897	000
Carmel Valley	D0 1534	Monterey	A. Collins	36 29	121 44		425	17S 2E	5		5P	5P				1957	900
Casadero	F9 1602	Sonoma	W. Borotta	38 32	123 07		1040	8N 12W	13		5P					1939	900
Chittenden Pass	D1 1739	San Benito	V. Haekio	36 54	121 36		125	12S 3E	12		8A					1945	900
Chittenden	D1 1739-01	Santa Cruz	N. Chadwell	36 54 08	121 36 17		104	12S 3E	11 K		8A					1960	000
Cienega	O1 1766	San Benito	A. Smith	36 42 54	121 20 48		900	14S 6E	18 E		8A					1950	407
Cloverdale 3 SSE	F9 1838	Sonoma	J. Byrd	38 46	122 59		320	11N 10W	29		8A	8A				1950	900
Cloverdale 11 W	F9 1840	Sonoma	F. Ornbauer	38 46	123 13		1820	11N 12W	17 C		C					1939	900
Concord 3 W	E4 1962	Contra Costa	H. Lee	37 58	121 59		200	1N 1W			8A					1954	900
Corn	E3 1976	Napa	City of Napa	38 28 50	122 22 30		225	7N 5W	1 N		8A					0	000
Coyote Dam-Lake Mendocino	F9 2103	Mendocino	C.O.B.	39 11	123 11		784	16N 12W	34		8A	8A	8A			1960	901
Coyote Reservoir	E3 2109	Santa Clara	SCVWD	37 05 06	121 32 24		800	10S 4E	9 C		9A	9A	9A			1938	900
Crest Ranch	D0 2159	Santa Cruz	N. Nielson	37 05 06	122 08 00		2640	10S 3W	1 R		8A					1948	000
Crockett	E4 2177	Contra Costa	C & H Sugar	38 02	122 13		12	3N 3W	32		8A	8A				1918	900
Devenport	D0 2290	Santa Cruz	F. Tacke	37 01	122 12		273	10S 3W	32 Q		8A	8A				1910	900
Del Norte	D2 2362	Monterey	USN School	36 36	121 52		46	15S 1E			C					1911	900
Duttons Landing	E3 2580	Napa	D. Steele	38 12	122 18		20	4N 4W	10		8A	8A	8A			1955	900
Evergreen-Silver Cr. Rd.	E6 2919	Santa Clara	R. Long	37 19	122 02		340	7S 2E	20 C		7A					0	000
Fairfield	E3 2933	Solano	Co. Surveyor	38 15	122 03		15	5N 2W	25 C		C					1940	900
Fairfield Police Station	E3 2934	Solano	Police Dept.	38 15	122 03		19	5N 2W	26		4P	4P				1951	900
Fort Bragg	F8 3161	Mendocino	Cal. West. RR	39 27	123 48		80	18N 17W	7		8A	8A				1895	900
Fort Bragg Aviation	F8 3164	Mendocino	WB Observer	39 24	123 49		61	18N 16W	25		11P	11P				1940	900
Fort Ross	F8 3191	Sonoma	C. Call	38 21	123 15		116	8N 12W	30 D		6P	6P				1874	900
Freedom 8 NNW	O1 3232	Santa Cruz	Westminster	37 03	121 49		1495	10S 1E	24 A		C					1952	900
Fremont Pl. State Park	D1 3238-01	San Benito	L. Beavenue	36 46 18	121 28 54		2500	13S 4E	35		8A	8A				1950	901
Gerber Ranch	E5 3387	Santa Clara	P. Gerber	37 22 00	121 29 12		2140	6S 4E	36 P		9A					1912	900
Gilroy	O1 3417	Santa Clara	Fire Dist.	37 00	121 34		194	11S 4E	6		8A	9A				1957	900
Gilroy 8 NE	O1 3419	Santa Clara	W. Kichham	37 02	121 26		1050	10S 5E	28 C		C					1942	900
Gilroy 14 FNE	O1 3422	Santa Clara	S. Auser	37 06	121 20		1350	10S 6E	5		8A					1940	900
Gonzales 9 ENE	D2 3502	San Benito	A. Bogue	36 33	121 18		2350	16S 6E	15 C		C					1943	900
Groton	F9 3577	Sonoma	L. Hallberg	38 25 54	122 51 48		200	7N 9W	21		7A	7A				1928	000
Groton 1 W	F9 3578	Sonoma	H. Persell	38 26	122 53		210	7N 9W	22		6P	6P				1896	900
Grass Valley	E3 3612-01	Solano	E. Marshall	38 17	122 10		414	5N 3W	3		8A					1893	414
Guadalupe Reservoir	E6 3681	Santa Clara	SCVWD	37 12	121 53		450	8S 1E	29 Q		8A					1936	414
Guernsey	F9 3683	Sonoma	J. Buttner	38 30	123 00		115	8N 10W	25		8A					1939	900
Half Moon Bay 2 NNW	E8 3714	San Mateo	Dept. Agr.	37 29	122 27		60	5S 5W	19		7A	7A				1939	900
Hamilton AFB	E2 3734	Marin	Air Force	38 04	122 31		-2	3N 6W			C					1934	900
Hayward 6 ESE	E4 3863	Alameda	M. Oronoso	37 39	121 58		925	3S 1W	28 C		C					1940	900
Healdsburg	F9 3875	Sonoma	Fire Dept.	38 37	122 50		101	9N 9W	19		6P	6P				1877	900
Healdsburg 2 E	F9 3878	Sonoma	W. Iverson	38 37	122 50		102	9N 9W			8A					1943	900
Hernandez 7 SE	O1 3928	San Benito	C. Akers	36 18	120 42		2765	19S 12E	6		C					1940	900
Hollister	O1 4022	San Benito	Hollister	36 51	121 24		285	12S 3E			5P	5P				1874	900
Hollister Co. 2	O1 4022-10	San Benito	DWR - L & WU	36 55 15	121 26 46		170	11S 5E	32 P		V					1962	806
Hollister No. 2	O1 4025	San Benito	Hollister	36 51	121 24		284	12S 5E			C					1938	900
Hollister 10 ENE	O1 4035	San Benito	E. Hubble	36 55	121 14		3000	12S 7E	5		C					0	900
Nopland Largo Station	F9 4100	Mendocino	C. Crawford	39 01	123 07		550	13N 12W			8A	5P				1941	900
Inverness-Mery	F9 4277	Marin	M. Mery	38 05 24	122 51 06		150	3N 9W	9		12N	5P				1958	000
Kellogg	F9 4480	Sonoma	R. Rubinow	38 40	122 40		1800	9N 7W	9		8A					1936	900
Kenfield	E2 4500	Marin	H. Muller	37 57	122 33		50	1N 5W	8		8A	8A				1888	900

TABLE A-1

## CLIMATOLOGICAL STATION INDEX

STATION NAME	STA NUMBER	COUNTY	OBSERVER	LATITUDE			LONGITUDE			ELEV IN FEET	TOWNSHIP RANGE	SECTION 40 ACRE TRACT	TIME OBSERVATION			RECORD BEGAN	COOP. NO
				°	'	"	°	'	"				P	T	Z		
King City	D2 4555	Monterey	Div. of Forestry	36 12			121 08			320	20S	EW 18	5P	5P		1887	900
Lafayette 2 NNE	E4 4633	Contra Costa	R. Sabrosa	37 55			122 06			540	1N	2W	8A			1956	900
Lagunitas Lake	F9 4652	Humboldt	H. H. H. H.	37 56 48			122 35 42			785	1N	7W	A			1881	413
La Honda	E8 4660	San Mateo	J. Allen	37 19			122 16			670	7S	4W 14	6P			1950	900
Lake Curry	E3 4677	Solano	J. Lynch	38 21 1E			122 07 18			396	6N	2W 19	8A			1926	418
Leroy Anderson Dam	E6 4916	Santa Clara	SCVWD	37 09 48			121 37 48			700	9S	3E 10	K	8A		1950	414
Lesington Reservoir	E6 4922	Santa Clara	SCVWD	37 10 36			121 59 18			700	9S	1W 5	J	8A	8A	1951	414
Linn Ranch	D3 4963	San Luis Obispo	O. Linn	35 41 06			120 43 24			870	26S	12E 7	F	5P	5P	1925	000
Livermore Sewage Plant	E5 4996	Alameda	Livermore	37 41 28			121 48 20			405	3S	1E 12	A	7A	7A	1961	000
Livermore 2 SW	E5 4997	Alameda	H. Osterman	37 39			121 47			545	3S	2E 20		7A	7A	1871	900
Lockwood 2 N	D3 5017	Monterey	A. Weferling	35 58			121 05			1104	22S	8E 34		8A		1940	900
Los Buros	05 5120-03	Monterey	D. Krenkel	35 52 42			121 23 30			2673	24S	5E 2		8A		1957	000
Los Gatos	E6 5123	Santa Clara	Los Gatos	37 14			121 51			428	8S	1W 21	P	5F	5F	1885	900
Los Gatos-Old Orchard Rd.	R6 5123-04	Santa Clara	R. Roll	37 14			121 55			285	6S	1W 21		7A	7A	1963	414
Los Gatos 4 SW	00 5125	Santa Clara	I. Miller	37 11			122 02			2215	9S	2W 1		9A		1957	900
Mare Island	E3 5333	Solano	N. Cavanaugh	38 06 00			122 16 12			52	3N	3W		C	C	1867	900
Martinez 3 S	E4 5371	Contra Costa	H. Plummer	37 58			122 08			225	2N	2W		C		1941	900
Martinez 3 SE	E4 5372	Contra Costa	C. Weaver	37 58			122 06			280	2N	2W		8A		1956	900
Martinez Fire Station	E4 5377	Contra Costa	Fire Dept.	38 01			122 08			26	2N	2W		8A	9A	1891	900
Mill Valley	E2 5647	Marin	County Engr.	37 53 48			122 31 36			10	1N	6W 31		8A		1944	411
Monterey	D4 5795	Monterey	R. Johnson	36 36			121 54			335	15S	1E		SS	SS	1878	900
Morgan Hill 2 E	E6 5844	San Jose	T. Donner	37 08			121 37			225	9S	3E		8A		1963	900
Morgan Hill 6 WNW	E6 5846	San Jose	H. Rose	37 09			121 46			660	9S	1E		C	D	900	
Morgan Hill SCS	D1 5853	San Jose	Cons. Ser.	37 08			121 39			350	9S	3E 28		C		1945	900
Morro Bay 3 N	D6 5869	San Luis Obispo	Std. 011 Co.	35 25			120 51			670	29S	10E 12		C		1959	900
Nt. Diablo North Gate	E4 5915	Contra Costa	Bch. & Pks.	37 52			121 56			2100	1S	1W 12		7A	7A	1952	900
Nt. Hamilton	E3 5933	San Jose	W. Observer	37 20			121 39			4206	7S	3E		11P	11P	1881	900
Mount Madonna	D1 5973	San Jose	J. Schell	37 01			121 43			1800	10S	2E 35		C		1945	900
Nt. Madonna Co. Park	D1 5973-11	San Jose	M. Posa	37 01			121 43			1880	11S	2E 1	B	8A		1937	909
Nt. Tamalpais 2 SW	D2 5996	Marin	Bch. & Pks.	37 54			122 36			1480	1N	7W		C		1959	900
Nut Woods	E2 6027	Marin	Park Ser.	37 54			122 34			170	1N	6W		9A		1940	900
Napa	E3 6065	Napa	E. Cline	38 18			122 17			16	5N	4W 3		7A		1945	900
Napa-Haven	E3 6068	Napa	O. Haven	38 17 30			122 17 48			30	5N	4W 10		8A	8A	1931	000
Napa State Hospital	E3 6074	Napa	J. Allenant	38 17			122 16			60	5N	4W 14	B	5P	5P	1877	900
Navarro 1 NW	F9 6105	Mendocino	Masonite Co.	39 10			123 34			220	15N	15W 7		C		1958	900
Newark	E5 6144	Alameda	Leslie Salt	37 31			122 02			14	5S	2W		8A	8A	1891	900
Novato 8 WNW	D2 6290	Marin	E. Thompson	38 08			122 43			350	4N	8W 24		C		1943	900
Novato Fire House	D2 6290-02	Marin	R. Lumsden	38 06 30			122 33 42			18	3N	7W 7		7		1957	411
Oakland W&A	E4 6335	Alameda	USPS	37 44			122 32			3	2S	3W		C	C	1939	900
Oakville 1 WNW	E3 6331	Napa	A. Calkins	38 27			122 25			160	7N	5W 21		6P		1906	900
Oakville 4 SW	E3 6354	Napa	R. Plummer	38 23			122 28			1465	6N	5W 6		C		1940	900
Occidental	F9 6370	Sonoma	A. Elmer	38 25			122 59			1000	7N	10W 33		7A		1940	900
Pacifics Orchell Ranch	01 6110	San Benito	J. Ohrwalt	36 44			121 22			950	14S	5E 12		8A		1924	900
Palo Alto City Hall	E7 6646	San Jose	Engr. Dept.	37 27			122 08			23	6S	3W 1		8A	8A	1953	900
Paloma	D2 6650	Monterey	J. Bell	36 21			121 30			1835	18S	4E 23		5P		1940	900
Parkfield	D3 6703	Monterey	H. Durham	35 53			120 26			1482	23S	14E 35		7A		1938	900
Parkfield 7 WNW	D3 6706	Monterey	K. Morrison	36 00			120 28			3590	22S	14E		C		1900	900
Pedanticus Rain Gage	E6 6791-43	San Jose	Neval Mag.	37 24 00			121 49 54			260	6S	1E		7A		1962	414
Pennings 2 N	F9 6792-03	Sonoma	F. Riehl	38 20			122 40			200	6N	7W 29		7A		1930	403
Petaluma P. S. No. 2	D2 6826	Sonoma	Fire Dept.	38 14			122 38			16	5N	7W 33		5P	5P	1871	900
Petaluma-Burns	D2 6826-01	Sonoma	Burns	38 13 00			122 42 48			240	4N	8W 2		8A		1959	901
Petaluma 1 N	D2 6829	Sonoma	V. Chait	38 15			122 38			30	5N	7W		C		1943	900
Pico Blanco B. S. Camp	D4 6856	Monterey	P. Harlan	36 20 18			121 47 42			900	18S	2E 30		8A		1957	000
Pinnacles National Mo.	D2 6926	San Benito	Park Ser.	36 29			121 11			1310	17S	7E 2		4P	4P	1937	900
Pleasanton Nursery	E5 6991-05	Alameda	J. P. Lopez	37 40			122 53			345	3S	3E 20		8A	430P	1939	000
Point Arena	F8 7009	Mendocino	J. Mungovan	38 55			123 42			122	12N	17W 12		8A	8A	1940	900
Potter Pinedas Ranch	05 7024	San Luis Obispo	Coast Guard	35 40			121 17			59	26S	6E 12		11P	11P	1938	900
Port Chicago RAD	D4 7070	Contra Costa	Neval Mag.	38 01			122 01			50	2N	1W		8A	8A	1946	900
Portola State Park	E8 7086	San Mateo	Park Ranger	37 14 42			122 12 42			422	8S	3W 8	Q	C		1959	901
Potter Valley 3 NW	F9 7107	Mendocino	W. Oespain	39 22			123 08			1060	17N	11W 6		C		1953	900
Potter Valley 3 SE	F9 7108	Mendocino	R. Near	39 18			123 04			1100	17N	11W 27		C		1952	900
Potter Valley P. H.	F9 7109	Mendocino	P. G. & E.	39 22			123 08			1014	17N	11W 6		3P	3P	1911	900
Priest Valley	D2 7150	Monterey	N. Palmer	36 11			120 42			2300	20S	12E 21		SS	SS	1898	900
Quico Saba-Ray Camp	D1 7190	San Benito	J. F. Berts	36 51 30			121 11 48			1630	12S	7E 27	H	7A	7A	1949	900
Quico Saba	D1 7249	San Benito	R. Somerville	36 50 12			121 12 48			1800	13S	7E 4	O	O		1931	000
Raucha Kico	D4 7249-21	Monterey	B. Stiller	36 14 24			121 47 24			900	19S	2E 31		EA		1941	000
Redwood City	E7 7339	San Mateo	Fire Dept.	37 29			122 14			31	5S	3W		5P	5P	1899	900
Richmond	E6 7414	Contra Costa	Richmond	37 56			122 21			55	1N	4W		8A	8A	1950	900
Roosevelt Ranch	D4 7539-01	Monterey	N. Roosevelt	36 10 48			121 41 48			1100	20S	2E 24		8A	8A	1946	000
Saint Helena	E3 7643	Napa	E. Faulson	38 30			122 28			255	8N	5W 31	K	6P	6P	1907	900
Saint Helena 4 SW	E3 7646	Napa	R. Learned	38 30			122 32			1792	7N	6W 4		C		1939	900
Saint Mary's College	B4 7661	Contra Costa	Fr. Benedict	37 50			122 06			625	1S	2N 17		5P	5P	1942	900
Salinas 2 E	D2 7668	Monterey	Fire Dept.	36 40			121 37			80	14S	3E 34		5P	5P	1958	900
Salinas PMA Airport	D2 7669	Monterey	Fed. Av. Agency	36 40			121 36			80	14S	3E		C	C	1873	900
Salinas Dam	D3 7672	San Luis Obispo	Dam Operator	35 20			120 30			1386	30S	14E 8		8A		1942	900

**TABLE A-1**  
**CLIMATOLOGICAL STATION INDEX**

STATION NAME	STA NUMBER	COUNTY	OBSERVER	LATITUDE	LONGITUDE	ELEV IN FEET	TOWNSHIP RANGE	SECTION 40 ACRES TRACT	TIME OF OBSERVATION	RECORD BEGAN	COOP NO
									P T E		
San Anselmo	D2 7707-01	Marin	Marin Co. Engr.	37 58 36	122 33 42	100	2N 6W 7		D	1937	411
San Antonio Mission	D3 7714	Monterey	San Antonio Man.	36 01	121 15	1060	22S 7E 18		SP	1959	900
San Ardo	D2 7716	Monterey	W. Rosenberg	36 00 48	120 54 06	440	22S 10E 16	K	8A	1894	900
San Benito	D1 7719	San Benito	J. Shields	36 30 30	121 04 54	1355	16S 8E 27	B	C	1936	900
San Clemente Dam	D4 7731	Monterey	Wtr & Tel Co	36 26 12	121 42 30	600	17S 2E 23		7A	1940	900
San Felipe Highway Sta.	D1 7755	Santa Clara	Oiv. of Highways	37 01	121 20	365	10S 6E		C	1943	900
San Fran. Richmond Sunset	E8 7767	San Francisco	San Francisco	37 46	122 30	300	2S 6W		C SP	1948	900
San Francisco WPAF	B7 7769	San Mateo	USWB	37 37	122 23	8	3S 5W		C	1928	900
San Fran. Fed. Off. Bldg.	E7 7772	San Francisco	USWB	37 47	122 25	52	2S 6W		C	1931	900
San Gregorio 3 SE	E8 7807	San Mateo	Pomponio Rch	37 18	122 20	155	7S 4W 30		SP SP	1954	900
San Jose	E6 7821	Santa Clara	E. Billwiller	37 21	121 54	70	7S 1E		C C	1874	900
San Jose Decid. F.F.S.	E6 7824	Santa Clara	A. Amatus	37 19	121 57	90	7S 1W 15	J	8A C	1933	801
San Juan Bautista Miss.	D1 7833	San Benito	B. A. Farber	36 50 42	121 32 00	200	12S 4E		8A	1900	804
San Lucas Guadici	D2 7845-10	Monterey	DNR - L & WU	36 07 25	121 01 09	380	21S 9E 8	B V	SP V	1962	806
San Mateo	E7 7854	San Mateo	Fire Dept.	37 34	122 19	30	4S 4W 29		SP SP	1974	806
San Rafael	E2 7880	Marin	City Engr.	37 5E	122 32	31	2N 6W		SP SP	1948	900
San Rafael Nat. Bank	D2 7880-08	Marin	Crocker-Clt. Bank	37 58 24	122 31 30	25	2N 6W		8A	1876	413
Santa Clara University	E6 7912	Santa Clara	Santa Clara Univ.	37 21	121 56	88	7S 1W		SP SP	1881	900
Santa Cruz	D0 7916	Santa Cruz	R. Burton	36 59	122 01	125	11S 1W		SP SP	1866	900
Santa Rita Muther	D2 7959-10	Monterey	DNR - L & WU	36 45 00	121 41 24	80	14S 3E 12	B	V C V	1962	806
Santa Rosa Sewage Plant	F9 7964	Sonoma	N. McKinnis	38 26 24	122 45 12	20	7R 8W 21	P	8A 8A 8A	1956	000
Santa Rosa	F9 7965	Sonoma	C. Newberry	38 27	122 42	167	7R 8W		7A 7A	1888	900
Santa Rosa Pedranzini	F9 7965-03	Sonoma	DNR - L & WU	38 21 38	122 44 31	90	6R 6W 16	K	V	1962	806
Saratoga-Clark	E6 7998-01	Santa Clara	J. Clarke	37 16 4E	121 59 42	272	7S 1W 31		SP SP	1956	41F
Saratoga-Krieger	E6 7998-03	Santa Clara	D. Krieger	37 15	122 02	240	8S 2W 1		7A	1960	414
Searsville Lake	E6 8068	San Mateo	A. Clepp	37 24	122 14	350	6S 3W 12		8A	1949	900
Sebastopol 4 SSE	F9 8072	Sonoma	G. Nahmens	38 21	122 49	150	6R 9W 6		C	1935	900
Skaggs Spg. Las Lomas Rch.	F9 8272	Sonoma	J. Leithold	38 41	122 08	1930	10R 12W 36		8A	1939	900
Black Canyon	D2 8276	Monterey	Oiv. of Forestry	36 05	120 40	1730	21S 12E 22		C	1953	900
Soledad CTF	D2 8338-01	Monterey	P.F. Bontadelli	36 28 26	121 22 34	230	17S 5E 12	B	9A 9A 9A	1961	000
Soledad	D2 8338	Monterey	J. Francioni	36 26	121 19	204	17S 6E		8A	1874	900
Sonoma	E2 8351	Sonoma	L. Oickey	38 17	122 27	20	5R 5W 7		SP SP	1952	900
Spreckels Hwy. S.	D2 8446	Monterey	B. Hennes	36 36	121 41	60	15S 3E		8A	1905	900
Spreckels	D2 8446-01	Monterey	Spreckels Sugar Co.	36 37	121 39	48	15S 3E		8A 8A	1905	000
Spreckels Hill - Laguna Seca	E6 8447	Santa Clara	SCWMD	37 12	121 44	384	-9S 3E			0	414
Stevens Creek Reservoir	E6 8519	Santa Clara	SCWMD	37 18	122 05	600	7S 2W 28	B	8A	1937	414
Suey Ranch	D6 8627	San Luis Obispo	Suey Ranch	34 59 40	120 22 35	390	9N 33W		SP	1909	900
Sunset Beach St. Park	D1 8680	Santa Cruz	Rch. & Pk.	36 54	121 50	85	11S 1E		C	1956	900
Talmage	F9 8776-01	Mendocino	L.G. Von Schillre	39 08	123 11	413	15N 12W	10	8A	1953	000
Tamalpais Valley	E2 8779	Marin	Giesener	37 52 42	122 32 36	250	1N 6W		8A	1959	901
Templeton	D3 8849	San Luis Obispo	A. Willhott	35 34 30	120 42 21	773	27S 12E 29		8A 8A	1886	000
The Geysers	F9 8885	Sonoma	P. Gevey	38 48	122 49	1600	11N 9W 23	C		1939	900
Thiburon-Topham	E7 8920-21	Marin	E. Topham	37 52 24	122 27 12	400	1S 5W 4		9A	1960	000
Travis Air Force Base	E3 9006	Solano	U.S.A.F.	38 16	121 56	50	5N 1W 24	E	8A	1943	902
Ukiah	F9 9122	Mendocino	Fire Dept.	39 09	123 12	623	15N 12W 17		SP SP	1877	900
Ukiah 4 MSW	F9 9124	Mendocino	M. Dory	39 08	123 17	1900	15N 13W 27		8A	1951	900
Upper Morro Creek	D6 9179	San Luis Obispo	E. Purser	35 27 18	120 45 12	1050	28S 11E 35	B	7A	1951	000
Upper San Leandro Fliters	F9 9185	Contra Costa	E. Bay HUD	37 46	122 10	390	2S 3W 11	C	7A	1944	900
Upper Tres Pinos	D1 9189	San Benito	E. Fraucher	36 38	121 02	2050	15S 9E 7		C	1940	900
Valleton	D3 9221	Monterey	A. Curtis	35 53	120 42	950	23S 12E 32		C	1940	900
Vacuna Reservoir	E6 9270	Santa Clara	SCWMD	37 14 36	121 58 00	300	8S 1W 15		8A	1962	414
Venado	F9 9273	Sonoma	J. Harper	38 37	123 01	1260	9N 10W 19		C	1939	900
Veterans Home	E3 9305	Napa	B. Barboza	38 23	122 22	170	6N 5W 1		8A RA	1912	000
Walmar School	E6 9420	Contra Costa	M. Dennis	37 57	122 05	128	1N 2W		SP	1934	900
Walnut Creek 2 ESE	E6 9423	Contra Costa	E. Whittemore	37 53	122 02	245	1N 2W 36		8A 8A	1887	900
Walnut Creek 2 DNE	E6 9426	Contra Costa	T. Vanasek	37 54	122 01	220	1N 2W 30		C	1944	900
Walnut Creek 4 E	E6 9427	Contra Costa	E. Irving	37 54	121 59	400	1N 1W		9A	1934	900
Watsonville Water Works	D1 9473	Santa Cruz	L. Bechis	36 56	121 46	95	11S 2E 32		8A	1880	900
Wildner Ranch	D0 9675	Santa Cruz	G. & Wilder	36 57 36	122 05 24	50	11S 2W 22		SP	1924	000
Wild Horae Valley	E3 9675-41	Solano	C. Siltz	38 17 53	122 11 13	1240	5N 3W 10	D	8A 2P	0	418
Woodacre	F9 9770	Marin	Oiv. of Forestry	38 00 24	122 38 30	430	2N 7W		2P 2P	1950	808
Wright	E6 9814	Santa Clara	M. Ware	37 08	121 57	1600	9S 1W 23		SP	1918	900
Yorkville	F8 9851	Mendocino	L. Hulbert	38 55	123 16	1100	12N 13W 2		C	1939	900
Yountville Gamble	E3 9861	Napa	DNR - L & WU	38 26 05	122 22 05	120	7N 5W 24	P	V C V	1962	806

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## SEASONAL PRECIPITATION

NUMBER	STATION NAME	TOTAL	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E6 0053	Alamitos Perc. Pond	23.92	0	0	T	7.37	.13	2.11	4.45	2.91	3.27	3.26	.42	T
E4 0064	Alamo LN	35.19	0	.07	T	12.67	.48	2.19	3.56	6.08	4.52	4.80	.71	.11
E6 0125	Almaden Reservoir	53.10	0	.03	0	17.14	.40	3.15	9.75	8.18	7.14	6.71	.60	0
E3 0212	Angwin FUC	55.21	0	.09	.33	14.47	1.76	6.55	10.54	4.61	7.12	8.62	1.12	0
D2 0322	Arroyo Seco	13.88	0	0	0	.59	T	T	.81	6.55	2.50	2.51	.05	.87
E3 0372	Atlas Road	53.62	0	.02	.37	11.52	1.83	4.80	13.40	3.66	7.90	8.92	1.08	.12
D3 0360-01	Atascadero H.M.S.	20.12	0	0	0	.71	0	1.46	2.33	6.57	4.47	4.08	.36	.14
D0 0674	Ben Lomond	67.81	0	.13	.12	14.97	.87	5.46	16.97	9.30	9.24	9.74	1.01	0
E4 0693	Berkeley	30.05	0	.12	.41	7.05	.94	3.50	4.84	3.10	3.51	5.97	.53	.08
E6 0706	Berryessa LE	25.16	0	0	0	3.95	.76	2.60	2.90	3.71	4.72	5.42	1.10	0
D4 0790	Big Sur State Park	60.16	0	0	T	8.15	.35	6.61	13.89	11.67	7.80	11.08	.53	.08
E6 0850	Black Mountain 2SW	42.84	T	.15	.16	11.44	.83	3.55	6.07	7.85	4.84	6.84	1.09	.02
F9 0876	Blakes Landing	31.32	0	.10	.25	8.72	.98	4.04	5.05	2.21	4.06	5.64	.27	0
F8 0973	Boonville HMS	47.22	0	.37	.73	8.41	3.03	4.24	4.93	7.32	7.70	9.05	1.44	0
F8 0973-02	Boonville - Farrer	65.08	0	.25	.87	10.97	3.76	5.98	8.13	9.38	12.32	11.46	1.96	0
F8 0973-04	Boonville - Bell Valley	M	0	.30	.71	8.41	3.67	4.30	6.63	4.22	D	D	D	0
D4 0998-27	Bouchers Gap	M	NR	NR	NR	NR	RB	4.22	9.79	10.33	9.20	9.58	.81	.04
D3 1034	Bradley	15.78	0	0	.02	.99	0	2.29	2.71	4.85	2.68	1.83	.41	T
D1 1170	Buena Vista	13.08	0	0	0	.89	e .27	e 1.93	2.34	1.69	2.60	2.64	.54	.18
E7 1206	Burlingame	24.96	0	.04	0	6.68	.37	2.81	3.63	3.15	4.17	3.66	.45	0
E4 1216	Burton Ranch	36.00	0	.05	.05	13.33	.60	2.69	3.83	5.68	4.38	4.68	.66	.05
D1 1247	Buzzard Lagoon	55.77	0	.25	0	10.75	1.98	4.80	11.78	7.32	6.82	11.24	.83	0
E5 1281	Calaveras Reservoir	22.81	0	.04	0	3.79	.66	2.26	1.65	4.08	4.10	5.24	.99	0
E6 1285	Calero Reservoir	33.72	0	0	0	9.10	.23	2.30	9.31	3.93	4.49	4.00	.36	0
E3 1312	Calistoga	53.78	0	.04	.36	13.87	1.77	5.93	5.82	8.78	8.17	8.11	.91	.02



# SEASONAL PRECIPITATION

NUMBER	STATION NAME	TOTAL	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E6 1341-10	Cambrian Park	M	NR	NR	NR	RB	.15	2.27	4.08	3.86	3.78	3.74	.55	.01
E6 1377-01	Cambell Water Company	23.03	e0	e0	e0	4.72	.13	2.49	5.24	2.55	3.65	3.69	.55	.01
D4 1534	Carmel Valley	19.72	0	0	0	1.09	.11	2.22	5.28	3.21	3.70	3.86	.22	.03
F9 1602	Cazadero	82.63	0	.65	.63	15.18	3.88	11.64	13.48	7.70	10.22	17.69	1.53	.03
D1 1739	Chittenden Pass	25.68	0	.50	.03	2.77	.40	2.86	5.08	4.48	3.92	5.35	.24	.05
D1 1739-01	Chittenden	24.95	0	0	0	2.64	.36	2.78	4.74	5.05	3.80	5.39	.19	T
D1 1766	Cienega	20.73	0	0	0	.70	.35	3.25	4.24	4.05	3.52	3.88	.57	.17
F9 1838	Cloverdale 3SSE	49.74	T	.26	.41	12.24	1.42	5.81	6.43	6.58	7.80	7.28	1.51	0
F9 1840	Cloverdale 11W	e73.52	0	.53	1.09	15.37	4.45	8.65	13.38	5.42	10.02	12.00	2.61	0
E4 1962	Concord 3E	23.30	0	.01	0	8.12	.37	1.60	2.03	4.18	3.16	3.18	.58	.07
E3 1976	Conn	38.42	0	0	0	9.90	.64	5.03	5.12	5.59	4.91	5.44	1.69	0
F9 2105	Coyote Dam - Lake Mendocino	40.60	0	.16	.51	8.60	2.72	5.15	4.20	5.04	5.87	7.37	.80	.18
E6 2109	Coyote Reservoir	27.79	0	0	T	2.42	.43	2.60	6.22	6.39	3.79	5.48	.45	.01
D0 2159	Crest Ranch	74.50	0	.50	.35	21.70	1.35	7.90	11.70	12.80	8.40	8.60	1.20	0
E4 2177	Crockett	28.88	0	.05	.01	8.88	.84	2.18	3.78	3.72	4.58	4.20	.59	.05
D0 2290	Davenport	29.15	.02	.15	.14	4.18	.41	3.03	3.48	5.79	6.06	5.16	.71	.02
D2 2362	Del Monte	13.10	0	0	.03	.73	.13	1.91	2.64	1.87	3.04	2.58	.17	0
E3 2580	Duttons Landing	28.67	0	.07	.06	7.95	.78	2.61	4.12	3.36	5.07	4.46	.19	T
E6 2919	Evergreen - Silver Creek Rd.	M	NR	NR	NR	NR	NR	RB	2.61	2.96	3.15	3.72	.57	T
E3 2933	Fairfield	25.63	0	.02	0	7.27	.70	2.17	5.02	2.30	3.41	4.21	.46	.07
F3 2934	Fairfield Police Station	28.20	0	0	T	7.85	.16	2.58	5.32	2.67	3.59	5.49	.45	.09
F8 3161	Fort Bragg	36.73	0	1.59	.83	5.82	e3.21	3.63	3.24	2.70	6.50	8.29	.84	.08
F8 3164	Fort Bragg Avn	46.17	0	1.97	.79	6.23	3.32	4.35	3.87	2.51	6.67	9.50	.96	0
F8 3191	Fort Ross	38.58	.02	.74	1.36	7.23	1.93	5.78	4.79	3.89	5.33	6.43	1.05	.03
D1 3232	Freedom 8NNW	e56.54	0	.19	0	11.61	1.51	4.78	15.84	5.23	7.17	9.54	.67	0

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NUMBER	STATION NAME	TOTAL	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
D1 3238	Fremont Peak State Park	23.41	0	.03	.03	2.30	.50	2.30	4.72	3.99	3.38	5.25	.86	.05
E5 3387	Gerber Ranch	23.96	0	0	T	3.87	.22	1.78	4.64	5.47	3.17	4.10	.71	0
D1 3417	Gilroy	26.52	0	T	T	2.13	.48	2.36	6.15	5.85	3.97	5.19	.39	T
D1 3419	Gilroy 8NE	e26.28	0	0	0	2.48	.32	2.27	e8.74	e3.20	3.67	5.11	.31	.18
D1 3422	Gilroy 14ENE	24.99	0	T	T	2.55	.26	1.85	4.80	5.93	3.69	5.36	.41	.14
D2 3502	Gonzales 9ENE	13.14	0	0	0	.55	.15	2.30	2.07	1.69	3.04	2.56	.66	.12
F9 3577	Graton	46.61	0	.26	.51	10.47	1.17	6.03	6.63	6.19	6.26	8.27	.82	0
F9 3578	Graton 1W	47.60	T	.18	.44	10.90	1.34	6.30	9.07	3.65	6.89	8.06	.77	T
E3 3612-01	Green Valley	M	D	D	D	D	D	D	5.56	5.96	D	D	D	D
E6 3681	Guadalupe Reservoir	46.97	0	.05	0	15.79	.35	2.48	9.25	6.92	6.02	5.37	.74	0
F9 3683	Guerneville	48.81	0	.33	.63	9.59	1.74	6.47	5.89	6.62	7.36	9.25	.93	0
E8 3714	Half Moon Bay 2NNW	33.08	0	.29	.51	10.97	.60	3.57	3.44	3.65	4.33	5.08	.64	0
E2 3734	Hamilton Air Force Base	33.43	0	T	T	8.07	.80	3.70	8.24	2.46	5.55	4.25	.36	0
E4 3863	Hayward 6NSE	e33.54	0	.03	0	10.90	1.05	2.44	5.22	2.65	4.73	5.58	e.92	.02
F9 3875	Healdsburg	50.32	T	.30	.26	10.83	2.06	6.40	10.75	3.99	7.74	6.85	1.14	0
F9 3878	Healdsburg 2E	46.35	0	.29	.23	9.92	1.93	5.98	6.65	6.33	7.04	6.80	1.18	0
D1 3928	Hernandez 7SE	19.09	0	0	0	.97	0	2.70	4.46	3.98	2.87	3.30	.52	.29
D1 4022	Hollister	14.87	0	T	T	.72	.25	1.78	3.89	2.91	2.11	2.72	.39	.10
D1 4025	Hollister No. 2	14.39	0	0	0	.69	.22	1.73	4.45	2.03	2.12	2.61	.39	.15
D1 4035	Hollister 10ENE	24.96	0	0	0	2.45	.31	2.15	6.02	3.21	4.23	5.79	.58	.22
F9 4100	Hopland Largo Station	41.85	0	.13	.57	8.42	2.57	4.75	4.86	4.36	7.85	7.54	.80	0
F9 4277	Inverness - Mery	45.70	0	.25	.50	12.90	1.30	5.35	6.20	4.10	6.10	8.05	.95	0
F9 4480	Kellogg	64.78	T	.27	.89	15.79	3.07	7.19	8.67	7.31	8.16	11.19	2.24	0
E2 4500	Kentfield	57.65	0	.21	.28	12.97	1.70	7.34	8.95	8.31	8.19	8.97	.73	T
D2 4555	King City	15.61	0	0	0	.59	0	2.00	5.99	1.68	2.89	1.67	.42	.37



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## SEASONAL PRECIPITATION

NUMBER	STATION NAME	TOTAL	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E4 4633	Lafayette 2NNE	35.68	0	.06	.08	13.02	.70	2.58	4.72	5.04	3.65	4.97	.81	.05
F9 4652	Lagunitas Lake	64.86	0	.29	.38	15.15	1.45	8.64	11.44	7.78	9.22	9.46	1.05	0
E8 4660	La Honda	40.05	.08	.29	.42	9.67	.83	3.87	6.69	5.01	5.38	6.33	1.38	.10
E3 4677	Lake Curry	39.10	0	0	.14	9.99	.77	2.67	6.02	5.75	6.36	6.51	.89	0
E6 4916	Leroy Anderson Dam	M	0	.04	0	D	.21	2.18	7.08	4.78	4.20	4.28	.21	0
E6 4922	Lexington Reservoir	54.92	0	.02	.01	14.69	.48	4.19	9.71	10.02	7.00	8.00	.80	0
D3 4963	Linn Ranch	M	0	0	0	.99	0	3.00	4.63	D	D	3.29	.20	.04
E5 4996	Livermore Sewage Plant	22.12	0	0	0	5.33	.30	1.93	2.03	5.60	3.10	3.35	.47	.01
E5 4997	Livermore 2SSW	18.14	0	T	0	3.64	.28	1.55	1.40	4.50	2.60	3.47	.70	T
D3 5017	Lockwood 2N	17.31	0	0	0	.47	0	2.92	4.80	2.65	3.13	2.98	.30	.06
D5 5120-03	Los Burros	M	NR	NR	NR	10.15	.10	5.70	16.05	15.65	18.70	D	1.56	.25
E6 5123	Los Gatos	40.65	0	0	0	11.26	.28	3.09	5.02	10.00	4.42	6.02	.56	0
E6 5123-04	Los Gatos - Old Orchard Road	M	NR	NR	NR	NR	NR	NR	NR	RB	4.69	4.39	.60	.01
D0 5125	Los Gatos 4SW	74.86	0	.03	.06	18.37	.72	5.91	8.99	15.77	10.85	12.91	1.25	T
E3 5333	Mare Island	27.71	0	.05	.02	8.61	.83	2.34	4.87	2.27	4.15	4.20	.37	0
E4 5371	Martinez 3S	32.59	0	.08	0	11.91	.54	2.11	5.68	2.73	5.12	3.96	.36	.10
E4 5372	Martinez 3SSE	31.15	0	.08	0	11.20	.59	2.13	3.84	4.51	4.59	3.79	.34	.08
E4 5377	Martinez Fire Station	27.63	0	.05	0	9.25	.62	1.89	3.15	4.39	4.11	3.73	.42	.02
E2 5647	Mill Valley	35.37	0	.05	.78	8.61	1.00	4.75	5.32	3.99	5.09	5.27	.51	0
D4 5795	Monterey	M	0	.25	.15	1.33	.37	2.21	3.05	2.70	4.14	NR	NR	NR
E6 5844	Morgan Hill 2E	28.18	0	0	0	4.54	.31	2.28	6.77	5.18	4.47	4.38	.25	0
E6 5844	Morgan Hill 6WNW	40.56	0	0	0	10.64	.22	2.58	14.37	2.45	5.07	4.93	.30	0
D1 5853	Morgan Hill SCS	28.28	0	0	0	4.41	.22	2.27	10.16	2.20	4.49	4.33	.20	0
D6 5869	Morro Bay 3N	21.23	0	0	0	.92	0	4.04	2.87	4.10	5.01	4.03	.62	.14
E4 5915	Mt. Diablo North Gate	34.20	0	0	0	10.67	.65	2.16	3.62	7.09	3.64	5.38	.99	0

TABLE A-2

## SEASONAL PRECIPITATION

NUMBER	STATION NAME	TOTAL	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E5 5933	Mt. Hamilton	17.93	0	0	T	1.71	.64	1.68	1.68	2.79	4.33	4.16	.94	0
D1 5973	Mt. Madonna	51.10	0	.10	.07	9.90	1.71	4.20	4.20	4.35	5.76	10.56	.35	0
D1 5973-11	Mt. Madonna Co. Pk.	49.14	.01	.20	.05	9.45	1.75	3.91	8.66	7.93	5.79	10.55	.68	.16
E2 5996	Mt. Tamalpais 2SW	47.07	.03	.41	2.15	11.50	2.02	6.04	7.53	3.48	4.74	8.09	.97	.11
E2 6027	Muir Woods	43.80	.03	.22	1.75	10.10	1.65	5.72	5.28	4.88	5.30	7.98	.85	.04
E3 6065	Napa	33.76	0	0	.16	10.05	.80	3.33	3.93	5.02	4.18	5.63	.66	T
E3 6068	Napa - Haven	33.57	0	.02	.21	9.82	.79	3.22	4.11	4.74	4.45	5.84	.37	T
E3 6074	Napa State Hospital	35.09	0	.11	.20	10.37	.97	3.93	4.71	3.79	4.91	5.66	.44	0
F9 6105	Navarro LNW	40.97	0	.74	.67	7.19	3.21	3.95	5.18	2.23	7.15	9.68	.97	0
E5 6144	Newark	19.39	0	0	0	4.53	.34	2.20	1.51	2.88	3.09	4.19	.57	.08
E2 6290	Novato 8WNW	37.79	0	.06	.43	10.61	1.04	4.39	6.61	2.76	5.01	6.39	.49	0
E2 6290-02	Novato Fire House	31.68	0	0	.05	8.12	.40	3.32	6.19	4.45	4.89	3.87	.39	0
E4 6335	Oakland WBAP	25.65	T	.05	.19	8.56	.61	2.47	2.68	2.64	3.31	4.60	.51	.03
E3 6351	Oakville LWNW		0	.03	.27	11.08	.79	4.24					.59	T
E3 6354	Oakville 4SW	51.42	0	.07	.25	14.85	1.29	5.60	10.40	3.93	7.37	6.91	.75	0
F9 6370	Occidental	57.35	0	.47	1.40	11.44	1.93	9.44	7.85	6.12	7.48	9.90	1.24	.08
D1 6610	Paicines Ohrwall Ranch	17.24	0	0	0	.69	.26	2.18	2.84	4.22	2.86	3.52	.55	.12
E7 6646	Palo Alto City Hall	17.12	0	T	T	2.92	.41	2.30	1.88	3.66	2.37	3.05	.51	.02
D2 6650	Paloma	25.72	0	0	T	2.09	.07	2.54	8.83	2.53	4.98	4.42	.18	.08
D3 6703	Parkfield	16.44	0	0	0	.67	0	1.60	2.19	5.91	3.09	2.51	.47	T
D3 6706	Parkfield 7NNW	16.61	0	0	0	.82	0	2.77	4.25	3.48	2.14	2.50	.63	.02
E6 6791-43	Penitencia Rain Gage	17.80	0	0	0	2.58	.66	1.91	1.35	3.15	3.20	4.13	.82	.0
F9 6792-03	Penngrove 2N	40.73	0	.07	.35	9.37	.88	3.80	5.50	9.64	5.07	5.53	.52	0
E2 6826	Petaluma Fire Station	28.96	0	.03	.08	7.29	.61	3.32	4.97	3.04	4.58	4.58	.46	0
E2 6826-01	Petaluma - Burns	37.50	0	0	.20	10.40	.85	3.60	5.30	5.35	5.25	6.05	.50	0

## SEASONAL PRECIPITATION

NUMBER	STATION NAME	TOTAL	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E2 6829	Petaluma LN	27.22	0	.05	.11	7.21	.45	2.96	4.84	2.74	4.43	4.00	.43	0
D4 6856	Pico Blanco Boy Scout Camp	M	0	0	0	11.10	.31	4.45	14.25	11.67	9.84	10.22	RE	NR
D2 6926	Pinnacles National Monument	16.15	0	0	0	.86	0	2.13	2.91	2.33	4.25	3.07	.15	.45
E5 6991-05	Pleasanton Nursery	26.35	0	.04	0	6.83	.42	1.64	2.28	6.71	4.25	3.67	.51	T
F8 7009	Point Arena	40.83	0	1.20	.86	7.31	3.51	5.18	3.72	3.59	6.83	7.65	.92	.06
D5 7024	Point Piedras Blancas	29.26	T	0	0	1.17	.23	5.80	6.12	5.32	4.32	5.85	.41	.04
E4 7070	Port Chicago NAD	23.13	0	T	0	8.05	.41	1.64	1.93	4.18	2.83	3.44	.59	.06
E8 7086	Portola State Park	43.84	T	T	T	10.29	T	4.38	4.31	7.68	6.97	8.98	1.23	T
F9 7107	Potter Valley 3NNW	44.11	0	.52	.87	8.92	3.73	5.63	6.88	2.56	6.61	7.61	.66	e.12
F9 7108	Potter Valley 3SE	33.53	0	.19	e.96	7.02	2.93	3.91	4.27	1.33	5.63	6.38	.81	.10
F9 7109	Potter Valley P.H.	47.89	0	.57	.90	9.56	3.98	6.19	6.51	3.47	7.63	8.28	.67	e.13
D2 7150	Priest Valley	22.09	0	0	T	1.43	.05	2.99	4.42	4.54	4.36	3.59	.56	.15
D1 7190	Quien Sabe - Hay Camp	17.55	0	0	0	1.02	.38	1.96	1.47	4.50	2.72	4.44	.78	.28
D1 7249	Rancho Quien Sabe	18.55	0	0	0	1.23	.38	2.07	1.89	4.62	2.96	4.43	.79	.18
D4 7249-21	Rancho Rico	63.14	0	.08	.01	9.05	.44	7.38	19.08	6.32	8.49	11.38	.72	.19
E7 7339	Redwood City	24.32	0	.01	.01	6.39	.33	2.82	4.46	3.20	3.63	2.92	.55	T
E4 7414	Richmond	29.54	0	.10	.08	7.38	.99	3.48	4.20	3.47	4.20	5.14	.50	0
D4 7539-01	Roosevelt Ranch	59.82	0	0	0	9.30	.35	8.50	6.90	20.05	5.49	8.61	.53	.09
E3 7643	Saint Helena	44.58	0	.04	.23	11.77	1.07	5.38	8.58	4.63	6.07	6.24	.57	0
E3 7646	Saint Helena 4WSW	53.82	0	.12	.73	14.80	1.71	6.65	8.81	3.51	7.87	8.42	1.20	0
E4 7661	Saint Mary's College	40.56	0	.08	.02	13.84	.99	3.07	5.82	4.99	4.90	5.96	.76	.13
D2 7668	Salinas 2E	14.53	0	.02	T	.61	.38	1.78	2.95	2.20	3.25	3.17	.17	0
D2 7669	Salinas FAA Airport	13.70	T	.03	.01	.65	.40	1.73	2.81	1.95	3.00	2.95	.16	.01
D3 7672	Salinas Dam	19.50	0	0	0	1.03	.02	1.09	2.72	5.89	4.43	3.69	.60	.03
E2 7701-01	San Anselmo	52.08	0	.01	T	12.99	.84	5.91	11.80	5.69	8.12	6.17	.55	0

TABLE A-2

## SEASONAL PRECIPITATION

NUMBER	STATION NAME	TOTAL	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
D3 7714	San Antonio Mission	24.35	0	0	T	1.09	.06	2.83	8.05	3.94	3.71	4.06	.50	.11
D2 7716	San Ardo	14.44	0	0	0	.33	0	2.26	2.99	4.19	2.65	1.77	.25	0
D1 7719	San Benito	14.48	0	0	0	.56	0	2.25	3.28	1.89	3.42	2.39	.35	.34
D4 7731	San Clemente Dam	22.79	0	0	0	1.81	.10	2.29	5.37	4.53	4.27	4.14	.23	.05
D1 7755	San Felipe Highway Station	21.20	0	0	0	1.67	.28	1.68	6.16	2.89	3.29	4.75	.37	.11
E3 7767	San Francisco Richmond Sunset	26.72	T	0	.15	7.94	0	3.75	4.45	2.00	4.65	3.23	.55	0
E7 7769	San Francisco WBAP	25.39	T	.03	.09	7.30	.36	2.97	4.47	2.03	3.94	3.70	.50	T
E7 7772	San Francisco FOB	22.15	T	.07	.22	5.51	.60	2.81	3.35	1.92	3.87	3.35	.45	T
E8 7807	San Gregorio 3SE	37.68	.06	.27	.34	8.47	.84	4.07	6.10	4.16	6.14	6.15	1.01	.07
E6 7821	San Jose	20.24	0	T	T	4.59	.28	2.00	3.99	2.23	3.53	3.08	.52	.02
E6 7824	San Jose Decid FFS	21.24	0	T	T	4.14	.25	2.06	2.97	3.67	3.63	3.80	.72	0
D1 7835	San Juan Bautista Mission	19.22	0	0	0	1.36	.29	2.46	4.20	4.00	3.31	3.33	.24	.03
E7 7864	San Mateo	27.93	0	.05	T	9.48	.31	2.60	2.87	3.32	3.72	5.02	.56	T
E2 7880	San Rafael	47.02	0	.10	.01	10.04	.86	6.56	11.60	4.41	6.87	6.16	.41	0
E2 7880-08	San Rafael National Bank	46.71	0	.08	.01	11.13	.91	5.09	8.69	6.77	7.41	6.12	.50	0
E6 7912	Santa Clara University	18.83	0	0	0	4.16	.08	2.01	3.30	1.90	3.56	3.31	.51	T
D0 7916	Santa Cruz	33.86	0	.05	.31	2.95	.99	3.70	7.15	4.91	5.81	7.41	.55	.03
F9 7964	Santa Rosa Sewage Plant	31.24	0	.09	.24	7.81	.83	4.40	4.87	2.08	4.94	5.42	.56	0
F9 7965	Santa Rosa	35.64	0	.08	.36	9.47	.95	4.64	3.75	4.22	4.94	6.57	.66	0
E6 7998-01	Saratoga - Clark	27.81	0	0	0	6.87	.19	2.37	4.68	4.60	4.36	4.22	.52	T
E6 7998-03	Saratoga - Kriege	30.06	0	0	0	7.01	.26	2.73	5.85	5.36	4.30	4.02	.53	T
E6 8068	Searsville Lake	34.98	0	.04	.05	8.65	1.02	3.43	3.99	5.58	5.66	5.88	.68	0
F9 8072	Sebastopol 4SSE	33.15	0	.09	.39	8.75	.73	3.60	4.96	2.59	5.48	5.87	.69	0
F9 8272	Skagg Spg. Las Lomas Ranch	70.81	0	.59	.56	15.42	2.75	7.95	9.09	9.71	9.72	12.58	2.42	.02
D2 8276	Slack Canyon	18.29	0	0	0	.87	.03	2.86	3.75	4.33	2.86	2.81	.66	.12



## SEASONAL PRECIPITATION

NUMBER	STATION NAME	TOTAL	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
D2 8338-01	Soledad C.T.F.	11.40	0	0	0	.25	.04	1.78	2.46	2.12	2.65	1.73	.14	.23
D2 8338	Soledad	12.36	0	.01	.01	.33	.06	1.82	2.67	2.32	2.62	2.13	.19	.20
E2 8351	Sonoma	34.40	0	T	.46	9.12	.69	4.57	5.77	2.94	4.86	5.28	.71	0
D2 8446	Spreckels Highway Br.	14.02	0	T	0	.63	.29	1.87	1.67	2.84	3.31	3.16	.24	.01
D2 8446-01	Spreckels	12.99	0	0	0	.55	.31	1.86	2.26	1.90	3.22	2.68	.21	0
E6 8447	Spreckels Hill - Laguna Seca	27.02	0	0	0	6.81	.23	1.92	6.57	3.94	3.63	3.58	.34	.0
E6 8519	Stevens Creek Reservoir	34.84	0	T	T	7.87	.34	3.18	5.40	6.59	5.20	5.20	1.06	.0
D6 8627	Suey Ranch	13.53	0	0	0	.54	0	.42	1.01	4.05	3.53	3.10	.88	0
D1 8680	Sunset Beach State Park	23.89	0	.09	0	2.22	.27	2.93	6.24	3.17	4.30	4.48	.19	0
F9 8776-01	Talmage	37.34	0	.15	.76	7.19	2.81	4.53	4.07	4.51	6.26	6.21	.85	0
E2 8779	Tamalpais Valley	40.19	0	.12	1.05	9.28	1.47	5.15	5.35	4.48	5.48	7.06	.75	0
D3 8849	Templeton	17.70	0	0	0	0	T	2.32	2.67	5.65	3.58	3.08	.39	.01
F9 8885	The Geysers	68.06	0	.19	.47	14.85	2.26	8.14	14.30	4.58	10.10	10.59	2.58	0
E2 8920-21	Tiburon - Topham	48.03	0	.01	.87	11.15	.75	6.18	7.10	6.72	7.65	6.74	.87	0
E3 9006	Travis Air Force Base	24.55	0	.01	.01	4.74	.48	2.45	4.56	2.83	4.60	4.11	.72	.04
F9 9122	Ukiah	44.22	0	.20	.68	7.74	3.09	5.25	7.75	3.22	7.61	7.61	1.07	T
F9 9124	Ukiah AWSW	54.93	.0	.36	.87	9.24	3.64	5.60	4.36	6.66	9.05	9.87	1.28	T
D6 9179	Upper Morro Creek	30.47	0	0	0	2.26	.10	3.18	5.79	6.03	6.26	5.72	.81	.32
E4 9185	Upper San Leandro Filters	35.13	0	.14	.43	13.13	.95	2.97	2.62	4.47	4.09	5.64	.69	0
D1 9189	Upper Tres Pinos	13.38	0	0	0	.71	.16	2.19	2.29	2.13	3.30	2.30	.30	0
D3 9221	Valleton	14.56	0	0	0	.29	0	2.47	3.37	3.49	2.64	1.89	.41	0
E6 9270	Vasona Reservoir	M	D	.02	D	D	D	2.66	6.19	4.54	4.31	4.35	.44	D
F9 9273	Venado	70.54	0	.49	.60	13.52	3.20	8.78	15.97	5.62	9.75	10.71	1.90	0
E3 9305	Veterans Home	41.37	0	.02	T	11.76	1.02	5.18	7.07	2.75	6.97	5.97	.63	0
E4 9420	Walmar School	31.98	0	.06	T	10.99	.49	2.19	6.27	3.34	3.82	4.10	.72	0

## SEASONAL PRECIPITATION

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TABLE A-3

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E6 0053	Max	90	96	93	88	82	73	65	77	75	73	89	93
	Min	48	47	37	37	31	28	22	37	34	35	39	44
	Avg Max	80.7	82.3	78.4	71.7	66.3	59.4	55.7	67.0	63.5	63.4	70.5	80.0
	Avg Min	51.6	53.6	49.1	47.1	43.3	39.0	34.0	45.7	40.3	44.3	49.4	50.4
	Avg	66.2	68.0	63.8	59.4	54.8	49.2	44.9	56.0	51.9	53.9	60.0	65.2
E4 0064	Max	99	100	93	90	78	65	60	71	71	73	88	97
	Min	49	48	47	44	32	25	24	37	32	33	40	44
	Avg Max	78.2	86.1	82.0	70.8	65.1	53.9	51.2	65.3	63.2	64.5	71.6	79.3
	Avg Min	50.0	53.3	51.2	51.1	43.2	38.5	32.2	45.7	38.7	42.4	49.1	50.8
	Avg	64.1	69.7	66.6	61.0	54.1	46.2	42.2	55.5	51.0	53.5	60.4	65.1
E3 0212	Max	97	100	94	82	78	66	64	71	68	69	85	98
	Min	46	45	42	40	35	29	27	38	26	27	34	41
	Avg Max	87.5	86.1	81.6	68.7	61.5	55.7	52.8	60.5	55.5	55.7	67.9	79.5
	Avg Min	53.3	51.7	49.4	50.5	45.3	42.6	35.7	45.8	36.7	36.9	45.9	48.4
	Avg	70.4	68.9	65.5	59.6	53.4	49.2	44.3	53.2	46.1	46.3	56.9	64.0
D3 0360-01	Max	D	D	D	D	D	D	70	79	76	80	92	100
	Min	D	D	D	D	D	D	17	34	30	32	38	46
	Avg Max	D	D	D	D	D	D	60.6	68.4	65.4	66.4	74.8	82.3
	Avg Min	D	D	D	D	D	D	31.8	45.9	37.7	40.3	47.8	50.0
	Avg	D	D	D	D	D	D	46.2	57.2	51.6	53.4	61.3	66.2
D0 0674	Max	88	99	87	86	82	68	64	75	74	73	83	85
	Min	43	46	42	38	31	25	22	32	30	33	39	42
	Avg Max	78.1	84.6	78.4	73.0	68.8	58.1	56.4	65.9	60.1	61.4	69.2	75.6
	Avg Min	47.3	49.3	47.7	44.8	40.6	38.4	32.9	43.4	37.8	40.9	45.2	46.6
	Avg	62.7	67.0	63.1	58.9	54.7	48.3	44.7	54.7	49.0	51.2	57.2	61.1

TABLE A-3

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E4 0693	Max	72	87	78	79	77	67	63	70	68	72	78	77
	Min	50	48	51	48	39	34	33	45	39	39	45	49
	Avg Max	66.2	70.5	66.5	67.3	64.1	58.4	54.2	63.9	60.4	60.7	64.9	68.2
	Avg Min	52.0	54.8	53.4	52.6	48.9	44.0	39.5	50.8	44.9	46.6	51.4	52.6
E7 1206	Avg	59.1	62.7	60.0	60.0	56.5	51.2	46.9	57.4	52.7	53.7	58.2	60.4
	Max	85	86	86	78	76	65	64	69	69	71	84	79
	Min	47	47	44	41	34	29	25	36	34	35	41	42
	Avg Max	72.6	76.3	72.3	69.2	65.3	56.6	55.1	64.5	62.7	63.3	69.2	72.6
	Avg Min	52.6	54.0	50.5	50.1	45.7	42.2	35.4	47.7	41.2	43.3	49.7	48.2
	Avg	62.6	65.2	61.4	59.7	55.5	49.4	45.3	56.1	52.0	53.5	59.5	60.4
D4 1534	Max	87	104	92	92	96	83	77	81	75	73	80	83
	Min	39	42	40	36	30	27	23	38	32	36	37	39
	Avg Max	75.0	82.2	76.5	77.7	70.9	66.4	62.8	68.7	63.5	63.0	66.4	71.6
	Avg Min	46.0	48.5	47.1	47.2	42.8	39.4	35.0	45.0	38.1	41.4	46.4	46.7
F9 1838	Avg	60.5	65.4	61.8	62.5	56.9	52.9	48.9	56.9	50.8	52.2	56.4	59.2
	Max	103	104	99	92	86	69	68	78	76	M	93	98
	Min	47	45	47	46	37	26	26	38	32	M	37	46
	Avg Max	89.1	89.0	84.5	73.4	67.5	58.6	58.9	66.3	61.8	M	73.6	81.2
	Avg Min	50.5	54.3	50.8	50.2	45.7	39.6	33.5	46.8	40.9	M	47.8	50.3
	Avg	69.8	71.7	67.7	61.8	56.6	49.1	46.2	56.6	51.4	M	60.7	65.8
F9 2105	Max	104	103	102	94	87	74	68	75	71	74	90	102
	Min	45	43	43	38	32	20	15	30	25	30	34	40
	Avg Max	95	90.7	89.9	76.7	69.4	62.9	58.0	64.6	61.3	59.4	71.9	83.8
	Avg Min	52.2	52.5	48.2	44.1	39.5	37.3	27.8	43.2	33.9	37.5	43.7	48.4
	Avg	73.6	71.6	69.1	60.4	54.5	50.1	42.9	53.9	47.6	48.5	57.8	66.1



## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E6 2109	Max	96	100	98	95	85	72	66	74	70	72	90	94
	Min	45	45	41	37	28	23	18	35	30	32	35	40
	Avg Max	86.1	87.8	82.1	72.3	66.0	60.0	56.3	65.2	60.8	61.6	69.3	77.7
	Avg Min	48.3	50.7	48.1	45.6	40.2	35.9	29.5	44.6	37.1	41.0	46.5	47.6
E4 2177	Avg	67.2	69.2	65.1	59.0	53.1	48.0	42.9	54.9	49.0	51.3	57.9	62.6
	Max	91	99	90	87	77	60	62	77	73	73	86	88
	Min	49	52	50	47	37	30	24	42	34	38	42	48
	Avg Max	81.9	84.4	79.3	70.9	66.8	54.5	51.5	64.6	62.7	62.4	69.9	76.8
	Avg Min	53.1	56.5	53.9	52.6	47.5	42.6	34.9	49.2	43.5	45.8	51.5	53.2
	Avg	67.5	70.5	66.6	61.8	57.2	48.6	43.2	56.9	53.1	54.1	60.7	65.0
D0 2290	Max	62	88	70	76	72	67	73	73	62	66	65	66
	Min	46	47	45	45	41	38	34	43	39	41	43	43
	Avg Max	59.3	65.2	61.8	63.4	62.6	58.0	55.8	61.7	57.5	57.8	59.0	61.0
	Avg Min	48.9	51.6	49.3	50.7	50.0	45.7	42.6	49.8	44.3	45.7	49.0	49.4
E3 2580	Avg	54.1	58.4	55.6	57.0	56.3	51.8	49.2	55.8	50.9	51.7	54.0	55.2
	Max	83	94	92	87	79	64	61	72	70	70	88	84
	Min	48	51	47	43	36	26	24	40	33	34	39	47
	Avg Max	74.5	78.3	74.3	71.9	67.5	59.9	53.8	65.0	63.3	62.4	69.4	74.2
	Avg Min	52.5	55.6	51.7	50.8	42.8	42.1	33.2	47.2	41.1	42.2	49.0	51.0
	Avg	63.5	67.0	63.0	61.4	55.2	51.0	43.5	56.1	52.2	52.3	59.2	62.6
E3 2934	Max	100	102	98	94	78	65	64	76	74	74	91	97
	Min	50	43	49	44	31	23	24	34	33	34	39	45
	Avg Max	86.9	88.8	84.6	74.8	67.9	54.4	54.6	67.4	64.0	64.3	73.5	82.0
	Avg Min	53.8	55.5	53.0	51.5	43.7	38.5	32.5	46.3	41.7	43.7	50.1	52.5
	Avg	70.4	72.2	68.8	63.2	55.8	46.5	43.6	56.9	52.9	54.0	61.8	67.3

TABLE A-3

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
F8 3161	Max	72	71	76	73	67	68	65	70	68	66	69	68
	Min	44	43	44	41	32	32	29	39	33	35	41	43
	Avg Max	62.6	65.2	64.2	62.9	60.6	56.9	56.1	61.7	58.4	59.9	63.5	63.1
	Avg Min	47.9	50.8	49.9	48.0	44.5	42.3	37.5	48.0	41.4	43.4	47.9	47.8
	Avg	55.3	58.0	57.1	55.5	52.6	49.6	46.8	54.9	49.9	51.7	55.7	55.5
F8 3164	Max	67	69	70	69	65	66	60	70	65	64	67	67
	Min	40	40	41	38	33	28	24	37	31	33	38	39
	Avg Max	60.5	62.5	61.7	61.3	59.8	56.2	55.3	60.7	57.9	58.3	60.3	61.6
	Avg Min	45.9	49.0	47.7	46.9	43.3	41.6	36.2	46.5	40.6	42.6	46.5	45.7
	Avg	53.2	55.8	54.7	54.1	51.6	48.9	45.8	53.6	49.3	50.5	53.4	53.7
F8 3191	Max	67	70	71	76	72	61	62	70	61	66	65	69
	Min	42	42	43	43	38	36	30	41	34	37	41	43
	Avg Max	61.5	64.5	64.1	62.7	61.0	55.5	54.7	60.8	57.0	58.0	61.0	62.6
	Avg Min	46.9	49.2	46.9	49.2	46.6	44.3	40.0	47.9	42.4	43.8	47.2	47.4
	Avg	54.2	56.9	55.5	56.0	53.8	49.9	47.4	54.4	49.7	50.9	54.1	55.0
DL 3238-01	Max	94	96	94	92	90	80	74	77	73	72	86	92
	Min	44	52	46	40	30	28	20	40	30	29	34	41
	Avg Max	85.2	82.1	81.1	69.3	66.6	61.2	55.7	62.7	54.9	53.2	65.9	72.7
	Avg Min	66.5	33.9	61.7	52.0	47.2	45.3	38.1	47.6	39.7	40.6	50.0	53.9
	Avg	75.9	58.0	71.4	60.7	56.9	53.3	46.9	55.2	47.3	46.9	58.0	63.3
DL 3417	Max	98	102	101	96	86	75	69	78	78	76	89	94
	Min	46	48	45	41	32	25	18	36	31	33	38	43
	Avg Max	84.8	88.2	82.5	75.9	69.3	61.7	57.6	68.0	64.9	64.5	72.7	80.3
	Avg Min	49.7	52.2	49.9	47.8	42.2	36.8	29.8	45.7	37.9	42.4	48.1	49.8
	Avg	67.3	70.2	66.2	61.9	55.8	49.3	43.7	56.9	51.4	53.5	60.4	65.1

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
F9 3577	Max	93	98	96	90	79	64	62	72	69	71.	85	86
	Min	44	43	44	40	32	25	24	36	32	33	38	43
	Avg Max	79.1	84.0	79.1	71.5	67.2	53.9	52.8	63.1	60.3	60.1	68.1	74.9
	Avg Min	49.8	52.1	50.2	50.6	45.0	41.4	34.7	46.5	39.7	42.2	48.1	48.6
	Avg	64.4	68.0	64.6	61.0	56.1	47.6	43.8	54.8	50.0	51.2	58.1	61.8
F9 3578	Max	95	98	94	85	76	61	61	74	71	71	88	87
	Min	40	42	40	39	29	23	21	34	30	31	36	43
	Avg Max	80.9	83.7	77.1	69.2	64.2	53.7	52.4	64.1	60.7	61.4	69.4	76.5
	Avg Min	46.2	49.1	46.4	47.7	42.2	39.5	32.1	45.8	38.2	41.0	47.7	47.8
	Avg	63.6	66.4	61.8	58.5	53.2	46.6	42.3	55.0	49.5	51.2	58.6	62.2
E8 3714	Max	64	86	69	75	81	69	66	68	63	64	69	66
	Min	43	47	48	45	35	33	32	40	36	39	40	42
	Avg Max	61.2	64.8	63.2	64.8	62.8	57.7	56.2	61.1	57.5	58.3	59.7	61.7
	Avg Min	49.8	52.4	51.2	49.1	45.5	44.4	39.9	48.0	42.5	45.9	49.3	48.7
	Avg	55.5	58.6	57.2	57.0	54.2	51.1	48.1	54.6	50.0	52.1	54.5	55.2
E2 3734	Max	90	95	88	82	74	62	61	71	68	70	82	83
	Min	45	45	45	41	36	26	23	39	31	35	40	46
	Avg Max	74.0	79.5	73.0	68.7	63.8	53.3	51.5	64.0	61.5	59.8	67.8	73.5
	Avg Min	48.8	52.1	49.2	50.1	45.3	41.0	33.2	47.9	42.4	44.6	50.4	50.9
	Avg	61.4	65.8	61.1	59.4	54.6	47.2	42.4	56.0	52.0	52.2	59.1	62.2
F9 3875	Max	101	105	101	95	83	62	69	78	76	76	93	97
	Min	46	45	44	42	37	26	23	38	32	34	39	44
	Avg Max	87.6	89.9	85.0	74.5	68.8	56.9	56.9	67.8	64.4	64.0	73.7	82.6
	Avg Min	50.2	52.9	50.0	48.8	44.9	40.4	33.7	48.4	41.0	43.0	49.2	51.9
	Avg	68.9	71.4	67.5	61.7	56.9	48.7	45.3	58.1	52.7	53.5	61.5	67.3

TABLE A-3

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
D1 4022	Hollister	Max	102	95	92	89	77	69	78	78	76	87	86
		Min	42	44	34	26	20	16	35	30	32	37	42
		Avg Max	77.6	83.3	78.0	76.1	64.3	59.8	68.3	64.5	64.0	68.9	73.8
		Avg Min	45.9	48.1	45.6	43.2	37.6	29.3	46.9	38.4	42.1	47.9	48.1
		Avg	61.8	65.7	61.8	59.7	53.7	44.6	57.6	51.5	53.1	58.4	61.0
E2 4500	Kentfield	Max	89	98	98	89	80	65	72	72	72	87	88
		Min	45	40	45	43	38	25	39	33	35	40	45
		Avg Max	79.4	82.0	77.7	71.1	67.0	54.4	65.0	61.9	62.2	68.6	75.6
		Avg Min	48.5	50.9	49.0	49.6	45.8	34.0	47.5	41.4	44.3	49.4	49.8
		Avg	64.0	66.5	63.4	60.4	56.4	44.2	56.3	51.7	53.3	59.0	62.7
D2 4555	King City	Max	88	102	94	96	89	75	78	78	79	88	92
		Min	41	45	42	38	27	18	34	30	32	37	39
		Avg Max	81.0	85.7	80.3	79.2	72.3	61.6	70.9	67.8	67.5	74.7	80.1
		Avg Min	49.9	51.0	49.5	46.3	38.6	30.9	45.6	37.8	41.7	47.5	48.7
		Avg	65.5	68.4	64.9	62.8	55.5	46.3	58.3	52.8	54.6	61.1	64.4
E6 4922	Lexington Reservoir	Max	95	98	91	91	80	65	73	72	78	88	89
		Min	43	45	42	37	32	26	35	31	32	38	41
		Avg Max	85.1	85.9	81.5	70.5	64.9	58.1	64.7	61.2	61.7	69.4	78.5
		Avg Min	48.5	50.0	47.9	45.4	43.5	39.6	45.9	38.5	41.4	47.8	48.0
		Avg	66.8	68.0	64.7	60.0	54.2	44.2	55.3	49.8	51.6	58.6	63.2
D3 4963	Linn Ranch	Max	101	103	96	98	82	71	64	D	75	90	98
		Min	45	45	43	40	26	22	17	D	32	37	44
		Avg Max	92.8	91.5	86.2	75.2	66.9	61.2	55.8	D	63.4	72.5	81.6
		Avg Min	50.3	54.2	50.4	47.8	39.5	35.8	30.8	D	39.2	48.0	49.9
		Avg	71.6	72.8	68.3	61.5	53.2	48.5	43.3	D	51.3	60.2	65.8

# MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E5 4996	Livermore Sewage Plant	Max	100	97	98	78	67	65	74	72	72	88	97
		Min	44	41	38	30	20	19	33	29	24	35	43
		Avg Max	85.5	82.2	72.7	67.0	58.3	54.4	66.6	62.8	62.3	71.0	80.7
		Avg Min	49.4	50.7	47.9	46.5	38.8	28.3	44.1	37.1	39.1	45.8	46.9
		Avg	67.4	68.2	65.0	59.6	47.0	41.4	55.4	50.0	50.7	58.4	63.8
E5 4997	Livermore 2 SSW	Max	101	103	98	95	78	65	75	71	72	91	100
		Min	45	47	45	41	30	22	33	30	31	37	42
		Avg Max	89.3	88.0	83.9	72.6	66.7	54.4	65.3	61.8	61.1	71.2	81.4
		Avg Min	50.5	52.0	50.2	46.6	39.9	28.9	44.1	36.6	40.1	46.8	47.7
		Avg	69.9	70.0	67.1	59.6	46.3	41.7	54.7	49.2	50.6	59.0	64.6
E6 5123	Los Gatos	Max	91	97	90	87	78	67	75	73	70	87	89
		Min	48	48	45	41	33	25	38	34	30	41	45
		Avg Max	83.0	83.1	79.4	71.6	66.3	55.6	65.8	62.5	62.1	70.5	78.0
		Avg Min	50.9	52.3	49.7	47.4	43.6	32.4	45.7	37.7	39.2	47.8	49.2
		Avg	67.0	67.7	64.6	59.5	55.0	44.0	55.8	50.1	50.7	59.2	63.6
E3 5333	Mare Island Naval Ship Yard	Max	85	95	89	85	71	65	71	70	79	92	88
		Min	54	55	54	51	40	31	47	39	40	46	54
		Avg Max	78.2	82.3	75.9	71.7	66.5	54.1	64.8	62.7	66.0	74.3	78.8
		Avg Min	56.2	59.9	58.1	56.3	51.5	40.0	52.3	46.9	49.0	59.4	57.6
		Avg	67.2	71.1	67.0	64.0	59.0	46.0	58.6	54.8	57.5	66.8	68.2
E4 5377	Martinez Fire Station	Max	94	100	95	90	80	64	72	73	74	89	93
		Min	49	49	49	44	36	26	39	33	36	41	48
		Avg Max	84.8	85.7	80.2	71.4	66.0	53.5	64.2	62.7	62.7	71.9	80.0
		Avg Min	53.4	55.4	52.2	50.7	45.0	32.4	46.9	41.8	44.4	50.2	52.9
		Avg	69.1	70.6	66.2	61.1	55.5	41.6	55.6	52.3	53.6	61.1	66.5



TABLE A-3

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
D4 5795	Monterey	Max	75	95	85	87	90	80	76	72	70	NR	NR
		Min	47	49	47	46	41	32	28	42	37	NR	NR
		Avg Max	64.5	71.5	67.0	71.4	67.9	63.9	60.6	66.2	62.6	NR	NR
		Avg Min	49.6	51.9	50.0	50.6	47.0	43.8	40.5	48.9	42.9	NR	NR
E4 5915	Mt. Diablo North Gate	Avg	57.1	61.7	58.5	61.0	57.5	53.9	50.6	57.6	52.8	NR	NR
		Max	96	100	95	90	81	72	68	72	71	70	86
		Min	43	42	41	41	36	29	24	41	29	30	37
		Avg Max	88.7	86.2	83.6	69.9	65.3	59.7	53.8	61.9	57.8	55.7	66.9
		Avg Min	62.4	57.7	53.0	49.8	46.5	44.0	37.2	47.1	38.7	38.3	45.0
		Avg	75.6	72.0	68.3	59.9	55.9	51.9	45.5	54.5	48.3	47.0	56.0
		Max	D	89	84	80	79	70	62	65	62	62	78
		Min	D	44	44	35	28	24	18	35	25	24	32
		Avg Max	D	77.7	75.3	65.0	57.1	54.7	49.5	55.6	46.6	45.4	61.1
		Avg Min	D	60.5	58.2	51.0	43.2	43.2	36.5	42.9	33.0	33.4	45.3
		Avg	D	69.1	66.8	58.0	50.2	49.0	43.0	49.3	39.8	39.4	53.2
		Max	96	104	98	90	82	64	64	72	72	73	89
E3 6068	Napa - Haven	Min	46	46	41	60	30	22	20	36	30	30	42
		Avg Max	81	84.5	79.1	73.2	67.7	57.8	54.3	65.2	63.2	63.2	70.2
		Avg Min	49.3	51.0	49.0	48.3	42.4	37.9	30.5	44.7	37.5	40.4	46.9
		Avg	65.2	67.8	64.0	60.8	55.0	47.8	42.4	55.0	50.4	51.8	58.6
E3 6074	Napa State Hospital	Max	91	99	97	92	84	65	64	75	74	74	89
		Min	48	46	45	40	34	25	20	38	25	30	37
		Avg Max	78.5	83.1	78.5	74.1	67.8	58.4	55.2	66.9	64.2	64.1	71.4
		Avg Min	50.7	51.2	50.5	50.3	43.7	40.1	32.0	46.6	38.0	38.6	47.9
		Avg	64.6	67.2	64.5	62.2	55.8	49.3	43.6	56.8	51.1	51.4	59.7

# MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E5 6144	Max	82	95	89	86	83	69	63	74	69	69	84	85
	Min	49	52	48	44	33	28	24	40	37	37	43	46
	Avg Max	74.5	77.9	73.6	70.9	66.2	56.7	53.6	64.4	62.0	61.4	67.3	73.1
	Avg Min	52.3	54.8	53.8	52.6	46.1	41.8	35.1	49.0	42.6	46.5	51.6	52.3
	Avg	63.4	66.4	63.7	61.8	56.2	49.3	44.4	56.7	52.3	54.0	59.5	62.7
E4 6335	Max	79	95	88	84	77	63	63	72	68	67	86	80
	Min	50	53	50	48	37	32	30	42	37	38	45	49
	Avg Max	69.5	74.1	69.9	68.2	64.9	56.0	54.3	64.4	60.8	60.9	65.7	69.9
	Avg Min	53.8	56.3	54.9	53.1	47.1	43.0	37.9	49.8	44.2	47.3	52.7	53.4
	Avg	61.7	65.2	62.4	60.7	56.0	49.5	46.1	57.1	52.5	54.1	59.2	61.7
E3 6646	Max	81	96	87	83	79	66	63	74	70		87	84
	Min	47	49	46	41	30	26	21	37	32	34	40	44
	Avg Max	73.8	78.8	73.2	70.1	64.6	56.0	53.4	64.8	62.6	62.5	69.0	75.5
	Avg Min	53.8	53.5	51.3	48.5	42.5	40.7	33.4	47.4	40.7	45.6	50.5	52.1
	Avg	63.8	66.2	62.3	59.3	53.6	48.4	43.4	56.1	51.7	54.1	59.8	63.8
E2 6826	Max	90	100	98	95	78	66	67	72	71	74	86	89
	Min	43	41	42	42	34	24	20	35	29	32	37	45
	Avg Max	82.1	84.4	82.0	73.3	68.4	57.5	55.9	65.4	63.2	62.6	69.0	76.4
	Avg Min	49.0	51.4	49.2	49.4	43.5	39.8	31.4	46.6	38.3	41.7	47.7	49.3
	Avg	65.6	67.9	65.6	61.4	56.0	48.7	43.7	56.0	50.8	52.2	58.4	62.9
D2 6926	Max	103	105	99	96	92	81	74	79	78	78	95	101
	Min	40	43	40	35	28	19	15	33	27	28	33	34
	Avg Max	96.4	95.9	91.7	82.1	73.0	67.8	62.6	69.5	64.4	64.2	76.5	85.2
	Avg Min	47.8	50.0	46.7	43.8	39.0	35.0	28.1	41.8	34.4	37.5	44.3	44.5
	Avg	72.1	73.0	69.2	63.0	56.0	51.4	45.4	55.7	49.4	50.9	60.4	64.9

TABLE A-3

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E5 6991-05	Pleasanton Nursery	Max	104	98	92	82	68	66	77	74	74	90	100
		Min	46	44	38	28	21	19	33	28	32	36	42
		Avg Max	90.3	89.1	84.2	72.1	66.8	55.5	66.8	62.7	61.8	71.6	82.3
		Avg Min	50.7	52.0	48.6	46.5	37.4	28.7	45.6	38.1	41.8	48.3	49.0
		Avg	70.5	70.6	66.4	59.3	52.8	42.1	56.2	50.4	51.8	60.0	65.6
F8 7009	Point Arena	Max	68	72	75	74	63	65	66	62	65	66	67
		Min	44	43	41	38	30	28	37	31	33	38	42
		Avg Max	62.8	65.1	63.6	62.9	55.9	55.4	60.2	57.4	58.3	61.7	62.4
		Avg Min	47.8	50.4	48.5	47.1	43.4	36.3	47.3	41.0	42.5	46.8	47.0
		Avg	55.3	57.8	56.1	55.0	48.9	45.9	53.8	49.2	50.4	54.3	54.7
D5 7024	Point Piedras Blancas	Max	68	71	68	73	76	73	70	68	65	65	70
		Min	46	48	49	47	40	38	45	39	38	44	43
		Avg Max	63.6	66.5	62.8	65.1	62.8	60.1	63.0	60.8	60.5	61.8	64.5
		Avg Min	51.1	51.6	51.4	51.6	49.0	46.0	50.5	45.2	46.3	48.7	49.5
		Avg	57.4	59.1	57.1	58.4	55.9	54.1	53.0	53.0	53.4	55.3	57.0
E4 7070	Port Chicago NAD	Max	94	101	91	83	76	64	72	74	73	89	97
		Min	44	48	40	38	30	23	31	30	31	37	45
		Avg Max	82.7	87.6	77.4	69.2	65.0	54.6	65.4	62.9	63.3	71.7	80.1
		Avg Min	50.0	53.3	47.7	46.3	40.2	38.5	43.5	36.8	40.8	47.9	50.6
		Avg	66.4	70.5	62.6	57.8	52.6	46.6	54.5	49.9	52.1	59.8	65.4
F9 7109	Potter Valley P.H.	Max	105	101	100	91	85	73	75	73	75	92	NR
		Min	42	42	41	36	24	18	28	24	29	34	NR
		Avg Max	M	93.3	91.5	75.4	66.2	M	61.6	61.6	59.2	75.8	NR
		Avg Min	M	49.8	46.2	42.7	37.0	34.6	42.5	34.6	39.4	44.7	NR
		Avg	M	71.6	68.9	59.1	51.6	M	43.5	48.1	49.3	60.3	NR



# MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
D2 7150	Priest Valley	Max	105	98	94	82	78	66	75	72	72	91	98
		Min	40	39	35	31	16	9	26	21	25	30	33
		Avg Max	94.1	93.5	88.9	76.4	62.1	57.0	65.2	59.9	59.9	72.0	82.1
		Avg Min	47.4	47.2	43.1	38.3	29.5	21.5	37.4	30.1	34.0	41.5	42.9
		Avg	70.8	70.4	66.0	57.4	48.0	39.3	51.3	45.0	47.0	56.8	62.5
D1 7190	Quien Sabe Hay Camp	Max	97	97	95	91	89	75	80	71	74	89	92
		Min	42	40	38	32	27	10	27	19	26	28	30
		Avg Max	88.6	86.0	81.3	74.9	65.0	57.8	65.9	59.2	60.0	67.4	73.5
		Avg Min	47.5	47.0	44.8	41.0	36.9	25.0	39.8	31.7	37.3	42.7	43.0
		Avg	68.0	66.5	63.0	58.0	51.0	44.4	52.8	45.4	48.6	55.0	58.2
E7 7339	Redwood City	Max	89	98	92	85	82	67	74	72	74	90	91
		Min	46	48	46	43	34	24	38	34	36	41	46
		Avg Max	80.7	84.5	79.2	72.2	67.8	56.1	67.1	65.2	65.6	73.2	79.6
		Avg Min	52.8	52.1	50.9	49.3	44.4	35.2	47.4	41.3	44.7	50.1	51.2
		Avg	66.8	68.3	65.1	60.8	56.1	45.7	57.3	53.3	55.2	61.7	65.4
D4 7539-01	Roosevelt Ranch	Max	78	95	86	88	84	76	72	75	70	76	81
		Min	49	50	51	50	44	42	47	41	41	48	49
		Avg Max	66.1	76.6	71.2	71.4	66.3	60.4	63.7	60.2	61.1	63.9	67.1
		Avg Min	52.8	60.2	56.4	54.1	54.7	47.5	51.8	47.2	48.2	53.3	53.3
		Avg	59.4	68.4	63.8	62.8	60.5	54.0	57.8	53.7	54.6	58.6	60.2
E4 7414	Richmond	Max	71	91	82	82	82	65	71	70	71	82	77
		Min	52	53	52	50	39	30	41	36	38	45	51
		Avg Max	65.3	69.8	67.8	69.5	66.5	55.3	65.5	62.4	61.4	66.3	68.3
		Avg Min	53.4	56.4	54.4	53.4	49.1	38.4	49.8	45.2	46.9	53.4	54.4
		Avg	59.4	63.1	61.1	61.5	57.8	46.9	57.7	53.8	54.2	59.9	61.4

TABLE A-3

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E3 7646	Saint Helena	Max	106	101	94	86	67	70	75	75	77	92	96
		Min	46	42	38	31	22	21	35	28	31	35	45
		Avg Max	88.9	84.2	74.4	67.6	57.3	56.2	67.0	63.4	63.3	73.0	82.5
		Avg Min	49.2	51.1	48.4	41.4	37.9	30.7	44.8	37.1	40.6	48.7	50.4
		Avg	69.1	70.2	66.3	61.5	47.6	43.5	55.9	50.3	52.0	60.9	66.5
E4 7661	Saint Mary's College	Max	98	100	94	89	75	61	71	72	70	91	96
		Min	48	46	43	38	27	20	33	27	29	36	41
		Avg Max	82.2	83.5	78.3	70.8	64.4	52.0	64.0	60.3	60.5	68.6	76.6
		Avg Min	51.2	52.3	50.9	44.8	37.9	29.6	44.1	37.0	40.6	47.7	49.8
		Avg	66.7	67.9	64.6	57.8	51.2	40.8	54.1	48.7	50.6	58.2	63.2
D2 7668	Salinas 2 E	Max	74	95	88	89	92	81	74	81	75	72	75
		Min	49	46	46	41	32	29	36	29	36	39	43
		Avg Max	66.5	75.1	70.0	74.8	71.1	65.5	67.8	63.2	63.4	66.6	68.5
		Avg Min	51.6	52.5	51.1	49.4	42.3	40.8	46.4	39.9	44.0	49.7	51.2
		Avg	59.1	63.8	60.6	62.1	56.7	53.2	57.1	51.6	53.7	58.2	59.9
D2 7669	Salinas FAA Airport	Max	75	95	87	89	92	81	74	76	73	79	76
		Min	47	46	47	43	33	25	38	32	37	40	44
		Avg Max	67.5	74.6	69.2	73.6	68.3	63.2	67.0	63.6	64.2	68.0	70.1
		Avg Min	51.9	52.7	51.9	50.4	43.9	42.4	48.1	40.8	45.2	51.2	52.4
		Avg	59.7	63.7	60.6	62.0	56.1	52.8	57.6	52.2	54.7	59.6	61.3
D3 7714	San Antonio Mission	Max	105	107	102	97	88	79	70	79	77	92	102
		Min	40	38	38	32	20	19	30	27	28	30	36
		Avg Max	98.7	97.5	93.2	80.2	73.0	67.0	70.4	68.0	65.7	76.9	87.5
		Avg Min	46.0	46.1	42.4	39.5	33.1	31.2	39.3	32.5	36.7	44.0	43.4
		Avg	72.4	71.8	67.8	59.0	53.1	49.1	54.9	50.3	51.2	60.5	65.5

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E8 7767	San Francisco Richmond Sunset	Max	70	73	69	74	83	66	72	64	72	77	68
		Min	47	50	50	45	35	32	42	37	39	43	45
		Avg Max	60.2	65.3	61.2	64.4	63.3	59.3	61.6	58.4	61.3	61.5	61.7
		Avg Min	50.9	54.4	53.1	50.3	48.4	45.3	49.9	42.7	47.6	50.8	50.9
		Avg	55.6	59.9	57.2	57.4	55.9	52.3	55.8	50.6	54.5	56.2	56.3
E7 7769	San Francisco WB AP	Max	78	92	86	80	79	64	70	68	67	78	76
		Min	49	51	48	47	37	31	41	38	39	43	46
		Avg Max	69.1	73.2	69.4	67.2	63.8	55.7	62.8	59.7	59.4	63.6	67.5
		Avg Min	51.2	53.9	52.5	52.0	47.6	43.5	48.9	44.0	46.5	50.0	49.7
		Avg	60.2	63.6	61.0	59.6	55.7	49.6	55.9	51.9	53.0	56.8	58.6
E7 7772	San Francisco F.O.B.	Max	67	86	77	79	81	65	72	68	67	77	71
		Min	49	50	50	52	46	41	47	41	42	49	49
		Avg Max	60.5	65.9	63.4	66.7	64.9	57.7	63.9	59.8	59.2	62.1	63.7
		Avg Min	51.4	54.0	53.2	54.8	52.7	48.0	52.8	48.4	49.5	52.3	52.4
		Avg	56.0	60.0	58.3	60.8	58.8	52.9	58.4	54.1	54.5	57.2	58.1
E8 7807	San Gregorio 3 SE	Max	72	90	85	82	86	75	75	65	67	73	75
		Min	38	41	41	38	28	27	35	30	33	38	38
		Avg Max	65.9	71.2	66.6	68.3	65.4	61.1	64.6	59.8	59.4	61.6	64.6
		Avg Min	46.3	49.0	48.1	45.7	41.0	39.8	46.3	38.2	42.7	48.2	47.4
		Avg	56.1	60.1	57.4	57.0	53.2	50.5	55.5	49.0	51.1	54.9	56.0
E6 7821	San Jose	Max	88	95	92	87	84	71	76	74	72	84	89
		Min	51	52	50	47	36	31	42	38	38	44	49
		Avg Max	79.0	81.7	77.6	71.6	67.2	58.8	67.3	64.2	63.4	70.6	77.6
		Avg Min	54.2	56.7	54.4	53.1	48.4	43.8	50.6	44.5	47.3	52.8	53.4
		Avg	66.6	69.2	66.0	62.4	57.8	51.3	59.0	54.4	55.4	61.7	65.5

TABLE A-3

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E6 7824	San Jose Decid. F.F.S.	Max 90	98	87	91	85	69	68	78	75	74	91	91
		Min 49	50	48	44	33	30	27	40	36	37	45	46
		Avg Max 82.0	83.7	78.5	72.7	68.3	58.6	57.1	68.5	65.2	65.7	71.2	79.2
		Avg Min 53.2	54.9	52.6	51.3	43.6	42.1	36.3	49.4	42.5	46.6	52.4	52.2
		Avg 67.6	69.3	65.6	62.0	56.0	50.4	46.7	59.0	53.8	56.2	61.8	65.7
E7 7864	San Mateo	Max 85	95	95	85	83	67	67	75	71	71	85	83
		Min 50	49	50	48	39	30	31	42	39	41	46	49
		Avg Max 74.8	78.3	74.1	70.4	66.8	59.5	56.6	66.4	63.3	62.6	68.0	72.1
		Avg Min 53.1	55.2	53.7	53.5	48.7	44.6	39.2	50.3	45.5	47.1	52.2	52.3
		Avg 64.0	66.8	63.9	62.0	57.8	52.1	47.9	58.4	54.4	54.9	60.1	62.2
E2 7880	San Rafael	Max 88	NR	89	89	80	66	67	74	73	73	89	90
		Min 45	NR	48	46	39	31	29	43	36	38	42	46
		Avg Max 79.4	NR	77.3	74.0	67.6	59.4	56.4	67.1	63.6	62.7	71.0	75.6
		Avg Min 50.6	NR	52.0	52.5	48.1	42.9	37.8	49.9	43.3	46.2	50.1	51.2
		Avg 65.0	NR	64.7	63.3	57.9	51.2	47.1	58.5	53.5	54.5	60.6	63.4
E6 7912	Santa Clara University	Max 88	95	91	88	83	70	67	76	73	73	89	90
		Min 49	52	48	42	33	30	25	40	36	35	42	46
		Avg Max 80.5	82.3	77.7	72.3	67.3	57.9	57.0	68.1	64.2	64.7	72.3	78.8
		Avg Min 52.8	54.9	52.1	50.7	45.1	40.9	35.1	48.0	41.7	44.6	50.5	51.8
		Avg 66.7	68.6	64.9	61.5	56.2	49.4	46.1	58.1	53.0	54.7	61.4	65.3
D0 7916	Santa Cruz	Max 76	103	89	84	88	77	76	75	73	73	78	86
		Min 44	45	43	38	33	26	22	35	32	31	40	41
		Avg Max 69.6	79.1	72.7	73.2	67.2	60.7	59.3	66.2	63.7	62.8	67.6	72.5
		Avg Min 49.9	49.8	47.2	45.5	41.7	40.0	34.6	45.7	39.5	42.2	47.9	47.9
		Avg 59.8	64.5	60.0	59.4	54.5	50.4	47.0	56.0	51.6	52.5	57.8	60.2



# MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
F9 7965	Max	94	99	99	92	83	68	67	75	75	74	89	91
	Min	43	42	43	39	30	23	21	36	29	31	36	44
	Avg Max	81.2	84.8	81.4	72.9	68.5	57.0	55.4	66.5	64.5	63.5	70.5	78.5
	Avg Min	48.1	50.5	47.8	46.9	39.8	37.3	30.6	44.5	36.5	39.5	47.3	48.3
	Avg	64.7	67.7	64.6	59.9	54.2	47.2	43.0	55.5	50.5	51.5	58.9	63.4
F9 7964	Max	86	95	91	85	76	61	60	68	63	71	80	83
	Min	42	39	40	36	29	21	20	33	28	31	34	43
	Avg Max	73.4	78.0	73.3	67.2	62.3	53.3	50.4	60.8	55.8	55.6	61.5	72.3
	Avg Min	47.6	49.6	46.2	47.0	40.5	36.5	31.5	44.0	36.3	39.4	44.7	47.6
	Avg	60.5	63.8	59.8	57.1	51.4	44.9	41.0	52.4	46.0	47.5	53.1	60.0
F8 8162	Max	86	74	71	70	63	62	68	66	62	60	65	74
	Min	36	47	47	45	42	41	39	45	38	39	43	44
	Avg Max	65.1	64.4	61.5	60.5	58.2	56.7	55.6	59.0	55.8	55.6	59.7	66.3
	Avg Min	49.4	52.6	50.0	50.5	48.3	46.7	43.5	49.9	45.2	47.2	50.2	51.6
	Avg	57.3	58.5	55.8	55.5	53.3	51.7	49.6	54.5	50.5	51.4	55.0	59.0
D2 8446-01	Max	69	94	84	86	90	80	69	75	75	71	76	76
	Min	46	45	47	40	32	28	22	36	30	38	40	42
	Avg Max	65.7	73.2	68.7	72.6	66.6	64.3	60.7	66.1	63.4	62.8	66.5	67.7
	Avg Min	50.9	52.3	51.0	48.5	42.7	41.3	33.5	46.1	39.5	44.2	49.5	51.7
	Avg	58.3	62.8	59.8	60.6	54.6	52.8	47.1	56.1	51.4	53.5	58.0	59.7
D2 8338-01	Max	80	95	81	89	89	80	70	76	74	73	79	82
	Min	42	43	42	39	30	27	20	36	29	32	38	40
	Avg Max	72.7	77.5	71.9	74.7	69.5	64.5	59.1	66.9	63.6	63.6	68.1	71.8
	Avg Min	50.3	51.0	49.0	45.5	41.8	39.1	33.2	48.2	38.3	42.0	47.5	49.2
	Avg	61.5	64.2	60.4	60.1	55.6	51.8	46.2	57.6	50.0	52.8	57.8	60.5

TABLE A-3

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E2 8351	Sonoma	Max	100	102	100	93	80	66	62	72	75	89	98
		Min	43	42	40	38	30	22	20	35	29	30	42
		Avg Max	88.5	89.2	84.0	73.5	67.1	56.3	54.4	67.6	64.2	73.2	82.3
		Avg Min	47.6	49.5	47.1	48.4	41.1	38.9	30.9	45.3	37.8	40.6	47.2
		Avg	68.1	69.4	65.6	61.0	54.1	47.6	42.7	56.5	51.0	60.2	65.3
D3 8849	Templeton	Max	103	105	100	95	87	77	72	79	76	92	98
		Min	45	43	40	39	22	19	17	37	29	31	42
		Avg Max	89.3	92.5	86.6	77.2	69.5	63.9	60.0	68.3	63.5	63.6	71.9
		Avg Min	49.0	50.4	47.3	45.8	37.8	36.4	31.0	46.7	37.5	40.8	48.8
		Avg	69.2	71.4	67.0	61.5	53.7	50.2	45.5	57.5	50.5	52.2	60.4
F9 9122	Ukiah	Max	104	103	101	93	85	70	68	77	73	95	104
		Min	49	46	46	38	28	21	19	33	29	32	42
		Avg Max	95.1	90.6	89.5	74.6	65.8	60.9	59.0	66.6	61.7	62.0	75.9
		Avg Min	53.7	54.2	50.5	47.0	41.3	37.3	31.1	45.6	37.0	39.7	48.0
		Avg	74.4	72.4	70.0	60.8	53.6	49.1	45.1	56.1	49.4	50.9	62.0
E4 9185	Upper San Leandro Filters	Max	80	92	87	88	79	69	63	74	72	69	85
		Min	47	52	49	45	34	32	31	41	35	35	42
		Avg Max	71.1	74.4	71.1	69.4	65.2	58.5	54.7	64.7	61.7	60.4	66.0
		Avg Min	50.1	53.7	52.2	50.7	46.3	41.9	37.9	48.9	41.9	43.6	49.5
		Avg	60.6	64.1	61.7	60.1	55.8	50.2	46.3	56.8	51.8	52.0	57.8
E3 9305	Veterans Home	Max	100	102	96	90	76	68	60	80	72	92	98
		Min	48	40	44	40	36	26	26	40	32	40	46
		Avg Max	87.8	88.1	81.5	72.4	66.1	58.1	54.5	64.7	61.8	65.8	76.8
		Avg Min	51.5	52.9	51.6	51.4	44.9	40.7	34.8	48.2	41.6	42.7	50.7
		Avg	69.6	70.5	66.6	61.9	55.5	49.4	44.6	56.4	51.7	54.2	63.8

## MONTHLY TEMPERATURES

NUMBER	STATION NAME	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E4 9423	Walnut Creek 2 ESE	Max	102	96	94	81	64	65	76	76	76	91	100
		Min	46	44	40	27	21	20	33	30	31	38	41
		Avg Max	88.2	83.2	72.6	67.4	55.1	53.9	66.0	64.4	64.1	71.9	80.6
		Avg Min	50.9	52.7	50.4	46.5	36.9	29.1	44.6	37.8	41.6	48.4	48.8
		Avg	69.6	70.0	66.8	59.6	46.0	41.5	55.3	51.1	52.9	60.2	64.7
D1 9473	Watsonville MW	Max	87	84	84	90	76	70	76	75	72	75	79
		Min	46	45	45	33	27	26	37	33	34	38	41
		Avg Max	67.7	72.6	66.6	71.5	63.6	58.6	65.8	62.3	62.0	65.2	67.6
		Avg Min	50.3	51.5	50.2	48.3	40.3	34.7	47.1	40.4	43.2	48.1	48.9
		Avg	59.0	62.1	58.4	59.9	52.0	46.7	56.5	51.4	52.6	56.7	58.3
F9 9770	Woodacre	Max	96	100	99	92	66	65	73	71	72	88	95
		Min	41	43	39	37	21	18	31	28	31	36	40
		Avg Max	85.0	85.6	81.4	70.1	56.6	54.0	64.3	60.6	57.6	67.6	75.9
		Avg Min	48.1	49.4	48.0	46.6	36.4	29.8	44.0	38.5	41.0	48.4	46.3
		Avg	66.6	67.5	64.7	58.4	46.5	41.9	54.2	49.6	49.3	58.0	61.1
E3 9675 41	Wild Horse Valley	Max	92	96	93	86	70	70	74	70	76	86	92
		Min	45	48	48	47	40	30	40	32	34	41	48
		Avg Max	82.1	82.8	77.8	71.0	65.5	60.3	67.2	62.4	64.5	71.6	78.2
		Avg Min	55.5	56.5	53.4	50.5	43.5	37.5	49.0	42.9	44.5	48.3	53.1
		Avg	68.8	69.6	65.6	60.8	51.9	47.2	58.1	52.6	54.5	60.0	65.6
		Max											
		Min											
		Avg Max											
		Avg Min											
		Avg											

TABLE A-4

## MONTHLY EVAPORATION

NUMBER	STATION NAME		JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
E6 0053	Alamitos Perc. Pond	Evap	8.97	9.09	6.15	3.35	2.14	.99	1.44	2.03	3.39	4.11	6.59	9.21
		Wind Movement	1486	1599	1329	1571	979	959	1470	1290	1571	1730	1663	1910
		Water Temp Avg Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp Avg Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip.	0	0	7.37	.13	2.11	4.45	2.91	3.27	3.26	.42	7	7
		Air Temp Max	90	96	93	88	82	73	65	77	75	73	89	93
		Air Temp Min	48	47	37	37	31	28	22	37	34	35	39	44
		Air Temp Avg Max	80.7	82.3	78.4	71.7	66.3	59.4	55.7	67.0	63.5	63.4	70.5	80.0
		Air Temp Avg Min	51.6	53.6	49.1	47.1	43.3	39.0	34.0	45.7	40.3	44.3	49.4	50.4
		Air Temp Avg	66.2	68.0	63.8	59.4	54.8	49.2	44.9	56.0	51.9	53.9	60.0	65.2
E7 1206	Surlingame	Evap	7.84	7.53	5.09	3.09	1.59	.89	1.32	1.46	2.98	3.70	5.58	7.29
		Wind Movement	2908	1908	1142	1138	490	309	703	560	990	1200	1310	1390
		Water Temp Avg Max	75.7	84.1	80.5	73.0	67.8	60.0	55.1	69.1	70.4	74.5	81.4	84.8
		Water Temp Avg Min	53.3	55.5	55.7	53.5	47.9	45.7	40.5	51.1	45.4	48.5	53.5	55.3
		Precip.	0	.04	0	6.68	.37	2.81	3.63	3.15	4.17	3.66	.45	0
		Air Temp Max	85	86	86	78	76	65	64	69	69	71	84	79
		Air Temp Min	47	47	44	41	34	29	25	36	34	35	41	42
		Air Temp Avg Max	72.6	76.3	72.3	69.2	65.3	56.6	55.1	64.5	62.7	63.3	69.2	72.6
		Air Temp Avg Min	52.6	54.0	50.5	50.1	45.7	42.2	35.4	47.7	41.2	43.3	49.7	48.2
		Air Temp Avg	62.6	65.2	61.4	59.7	55.5	49.4	45.3	56.1	52.0	53.5	59.5	60.4
F9 2105	Coyote Dam (Lake Mendocino)	Evap	12.75	9.95	7.67	3.21	1.80	1.10	1.20	2.11	3.11	3.63	5.97	9.28
		Wind Movement	1654	1583	1154	781	347	164	310	534	1146	1404	1348	1692
		Water Temp Avg Max	86.7	83.5	79.6	67.8	60.1	53.9	49.6	59.9	60.3	61.1	75.2	83.2
		Water Temp Avg Min	54.0	54.6	50.8	48.5	41.0	41.0	32.1	47.5	37.3	41.5	48.2	51.6
		Precip.	0	.16	.51	8.60	2.72	5.15	4.20	5.04	5.87	7.37	.80	.18
		Air Temp Max	104	103	102	94	87	74	68	75	71	74	-90	102
		Air Temp Min	45	43	43	38	32	20	15	30	25	30	34	40
		Air Temp Avg Max	95.0	90.7	89.9	76.7	69.4	62.9	58.0	64.6	61.3	59.4	71.9	83.8
		Air Temp Avg Min	52.2	52.5	48.2	44.1	39.5	37.3	27.8	43.2	33.9	37.5	43.7	48.4
		Air Temp Avg	73.6	71.6	69.1	60.4	54.5	50.1	42.9	53.9	47.6	48.5	57.8	66.1
E6 2109	Coyote Reservoir	Evap	7.34	8.09	5.09	3.11	1.75	.84	.78	1.44	2.61	2.77	4.23	6.76
		Wind Movement	471	729	505	412	279	101	257	84	172	128	169	383
		Water Temp Avg Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp Avg Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip.	0	0	7	2.42	.43	2.60	6.22	6.39	3.79	5.48	.45	.01
		Air Temp Max	96	100	98	95	85	72	66	74	70	72	90	94
		Air Temp Min	45	45	41	37	28	23	18	35	30	32	35	40
		Air Temp Avg Max	86.1	87.8	82.1	72.3	66.0	60.0	56.3	65.2	60.8	61.6	69.3	77.7
		Air Temp Avg Min	48.3	50.7	48.1	45.6	40.2	35.9	29.5	44.6	37.1	41.0	46.5	47.6
		Air Temp Avg	67.2	69.2	65.1	59.0	53.1	48.0	42.9	54.9	49.0	51.3	57.9	62.6
E3 2580	Duttons Landing	Evap	8.71	6.51	5.76	3.71	1.95	1.00	1.48	1.77	3.38	3.33	5.52	8.69
		Wind Movement	3810	3916	3037	2846	1470	1151	1521	1379	1910	2071	2984	3834
		Water Temp Avg Max	82.9	84.9	77.2	70.9	63.6	55.9	50.7	65.4	65.7	68.4	77.1	79.9
		Water Temp Avg Min	52.2	54.8	53.0	51.4	43.8	42.5	34.5	48.1	42.0	43.5	50.7	53.3
		Precip.	0	.07	.06	7.95	.78	2.61	4.12	3.36	5.07	4.46	.19	7
		Air Temp Max	83	94	92	87	79	64	61	72	70	70	88	84
		Air Temp Min	48	51	47	43	36	26	24	40	33	34	39	47
		Air Temp Avg Max	74.5	78.3	74.3	71.9	67.5	59.9	53.8	65.0	63.3	62.4	69.4	74.2
		Air Temp Avg Min	52.5	55.6	51.7	50.8	42.8	42.1	33.2	47.2	41.1	42.2	49.0	51.0
		Air Temp Avg	63.5	67.0	63.0	61.4	55.2	51.0	43.5	56.1	52.2	52.3	59.2	62.6



TABLE A-4  
MONTHLY EVAPORATION

NUMBER	STATION NAME		JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
01 4022-10	Bollister Costa	Evap	9.04	8.14	5.12	3.57	3.15	2.26	1.73	2.47	3.34	3.01	5.14	6.58
		Wind Movement	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip	.02	T	T	1.26	.26	2.16	4.42	3.23	2.57	3.82	.29	.13
		Air Temp. Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg. Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg. Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
E6 4922	Lexington Reservoir	Evap	8.81	8.32	6.10	3.01	1.76	.87	1.15	1.62	2.58	3.23	4.79	7.82
		Wind Movement	878	885	836	1252	800	779	943	NR	625	1127	697	924
		Water Temp. Avg. Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip	0	.02	.01	14.69	.48	4.19	9.71	10.02	7.00	8.00	.80	0
		Air Temp. Max	95	98	91	91	80	65	65	73	72	76	88	89
		Air Temp. Min	43	45	42	37	32	26	22	35	31	32	38	41
		Air Temp. Avg. Max	85.1	85.9	81.5	70.5	64.9	58.1	54.7	64.7	61.2	61.7	69.4	78.5
		Air Temp. Avg. Min	48.5	50.0	47.9	45.4	43.5	39.6	33.8	45.9	38.5	41.4	47.8	48.0
		Air Temp. Avg	66.8	68.0	64.7	60.0	54.2	48.8	44.2	55.3	49.8	51.6	58.6	63.2
E5 4996	Livermore Sewage Plant	Evap	12.72	9.77	7.22	4.03	2.16	1.11	1.24	2.25	2.95	3.21	4.72	9.93
		Wind Movement	3230	3160	2720	2680	1340	1300	1560	1340	1480	1230	1030	2660
		Water Temp. Avg. Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip	0	0	0	5.33	.30	1.93	2.03	5.60	3.10	3.35	.47	.01
		Air Temp. Max	99	100	97	98	78	67	65	74	72	72	88	97
		Air Temp. Min	44	45	41	38	30	20	19	33	29	24	35	43
		Air Temp. Avg. Max	85.5	85.6	82.2	72.7	67.0	58.3	54.4	66.6	62.8	62.3	71.0	80.7
		Air Temp. Avg. Min	49.4	50.7	47.9	46.5	38.8	35.8	28.3	44.1	37.1	39.1	45.8	46.9
		Air Temp. Avg	67.4	68.2	65.0	59.6	52.9	47.0	41.4	55.4	50.0	50.7	58.4	63.8
E5 6144	Berk	Evap	8.38	8.30	6.12	4.34	1.79	8.50	1.24	1.88	3.49	4.11	5.59	8.67
		Wind Movement	1934	1562	1709	1671	748	507	865	780	1581	1651	1682	2238
		Water Temp. Avg. Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip	0	0	0	4.53	.34	2.20	1.51	2.88	3.09	4.19	.57	.08
		Air Temp. Max	82	95	89	86	83	69	63	74	69	69	84	85
		Air Temp. Min	49	52	48	44	33	28	24	40	37	37	43	46
		Air Temp. Avg. Max	74.5	77.9	73.6	70.9	66.2	56.7	53.6	64.4	62.0	61.4	67.3	73.1
		Air Temp. Avg. Min	52.3	54.8	53.8	52.6	46.1	41.8	35.1	49.0	42.6	46.5	51.6	52.3
		Air Temp. Avg	63.4	66.4	63.7	61.8	56.2	49.3	44.4	56.7	52.3	54.0	59.5	62.7
D2 7845-10	San Lucas Guidict	Evap	9.01	8.32	5.82	4.56	3.48	2.67	3.18	3.67	3.78	4.33	6.78	7.27
		Wind Movement	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip	0	0	.03	.21	T	2.24	3.34	3.41	2.86	1.75	.32	.06
		Air Temp. Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg. Max	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg. Min	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

TABLE A-4

## MONTHLY EVAPORATION

NUMBER	STATION NAME		JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
D2 7959-10	Santa Rita Muther	Evap.	4.13	5.05	3.21	3.39	2.12	1.82	2.02	2.68	3.04	3.82	4.52	5.89
		Wind Movement	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Max.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Min.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip.	T	.01	.07	.97	.47	2.73	2.71	3.96	3.51	3.92	.16	T
		Air Temp. Max.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Min.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg. Max.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg. Min.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
P9 7964	Santa Rosa Sewage Plant	Evap.	8.16	7.94	6.03	3.41	1.93	1.88	1.18	1.57	3.16	3.32	4.53	6.10
		Wind Movement	2836	2898	2076	2319	1014	723	1533	1655	2488	2890	2639	2749
		Water Temp. Avg. Max.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Min.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip.	0	.09	.24	7.81	.83	4.40	4.87	2.08	4.94	5.42	.56	0
		Air Temp. Max.	86	95	91	85	76	61	60	68	63	71	80	83
		Air Temp. Min.	42	39	40	36	29	21	20	33	28	31	34	43
		Air Temp. Avg. Max.	73.4	78.0	73.3	67.2	62.3	53.3	50.4	60.8	55.8	55.6	61.5	72.3
		Air Temp. Avg. Min.	47.6	49.6	46.2	47.0	40.5	36.5	31.5	44.0	36.3	39.4	44.7	47.6
		Air Temp. Avg.	60.5	63.8	59.8	57.1	51.4	44.9	41.0	52.4	46.0	47.5	53.1	60.0
P9 7965-03	Santa Rosa Pedrenza Int.	Evap.	7.08	7.03	4.88	2.73	1.77	.78	1.06	1.65	2.77	2.97	4.86	5.50
		Wind Movement	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Max.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Min.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip.	0	.02	.15	8.19	.63	3.45	5.11	2.89	5.03	4.95	.46	T
		Air Temp. Max.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Min.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg. Max.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg. Min.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Air Temp. Avg.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
D2 8338-01	Soledad C.T.F.	Evap.	7.95	7.79	5.56	5.16	3.24	2.67	2.65	2.85	4.17	4.79	6.40	7.75
		Wind Movement	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	4218	4578
		Water Temp. Avg. Max.	NR	NR	NR	52.9	64.7	58.1	54.0	66.1	65.2	67.8	72.8	77.5
		Water Temp. Avg. Min.	NR	NR	NR	NR	43.7	40.7	35.7	46.5	40.0	43.4	47.1	47.4
		Precip.	0	0	0	.25	.04	1.78	2.46	2.12	2.63	1.73	.14	.23
		Air Temp. Max.	80	95	81	89	89	80	70	76	74	73	79	82
		Air Temp. Min.	42	43	42	39	30	27	20	36	29	32	38	40
		Air Temp. Avg. Max.	72.7	77.5	71.9	74.7	69.5	64.5	59.1	66.9	63.6	63.6	68.1	71.8
		Air Temp. Avg. Min.	50.3	51.0	49.0	45.5	41.8	39.1	33.2	48.2	38.3	42.0	47.5	49.2
		Air Temp. Avg.	61.5	64.2	60.4	60.1	55.6	51.8	46.2	57.6	50.0	52.8	57.8	60.5
E3 9861	Yountville Gamble	Evap.	8.33	7.75	5.53	3.35	2.72	.97	1.32	1.41	2.72	2.87	4.92	7.43
		Wind Movement	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1682
		Water Temp. Avg. Max.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Water Temp. Avg. Min.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Precip.	0	.02	.02	11.36	.63	3.96	8.92	2.62	5.66	4.64	.52	T
		Air Temp. Max.	NR	NR	NR	NR	NR	NR	NR	NR	69	73	84	91
		Air Temp. Min.	NR	NR	NR	NR	NR	NR	NR	NR	28	30	38	42
		Air Temp. Avg. Max.	NR	NR	NR	NR	NR	NR	NR	NR	60.9	61.2	69.5	78.0
		Air Temp. Avg. Min.	NR	NR	NR	NR	NR	NR	NR	NR	35.8	39.7	46.8	47.9
		Air Temp. Avg.	NR	NR	NR	NR	NR	NR	NR	NR	48.4	50.4	58.2	63.0

APPENDIX B

SURFACE WATER FLOW



## SURFACE WATER FLOW

This appendix presents surface water measurement data collected and assembled by the Department of Water Resources. It contains information collected in the Central Coastal Area during the 1963 water year covering the period from October 1, 1962 through September 30, 1963.

### Maximum and Minimum Tides

There are usually two high and two low waters in a day. Tides follow the moon more closely than they do the sun, and the lunar or tidal day is about 50 minutes longer than the solar day. This causes the tide to occur later each day, and a tide which has occurred near the end of one calendar day will be followed by a corresponding tide that may skip the next day and occur in the early morning of the third day. Also, the two high and two low tides are usually unequal. They are commonly designated as higher high, lower high, higher low, and lower low tides.

Table B-1 on pages B-6 and B-7 lists maximum and minimum tides at the Sacramento River at Collinsville and Suisun Bay at Benicia Arsenal, respectively. These data are obtained from graphical charts plotted by continuous water stage recorders. The values are in feet above -13.05 feet USC&GS mean sea level datum of 1929 at Collinsville and above -10.00 feet at Benicia Arsenal. The values in most cases represent higher high water and lower low water. During a calendar day in which three instead of four tides occurred the high value represents lower high water in the case where higher high tide did not occur and the low value represents higher low water in the case where lower low tide did not occur. The maximum and minimum values at the bottom of each monthly column represent the extremes observed during that month.

At the bottom of each table the maximum gage height of record shown is measured from the same datum as the daily high and low values.

#### Daily Mean Discharge

Table B-2 on pages B-8 and B-9 presents daily mean discharges in Arroyo de los Coches near Milpitas and in Butano Creek near Pescadero. Each of these stream gaging stations is equipped with a continuous water stage recorder. Each has a stage discharge relationship or rating developed. The rating gives the flow or discharge in cubic feet per second (cfs) for each water stage or gage height at a station.

The rating is developed by making streamflow measurements with a current meter at various water stages ranging from near minimum to near maximum. Normally, the rating is fairly permanent where there is a fixed channel and a fixed flow regimen at the station. The rating varies, however, where the bed of the channel is of loose shifting sand and gravel or where vegetative growth builds up in the channel changing the flow regime. Where the rating is not permanent and varies periodically, more frequent measurements of discharge are necessary to accurately determine the discharge.

The mean, maximum, and minimum values at the bottom of each monthly column are representative of that month and year only. The acre-feet value for each month is a total of the daily values which are converted to acre-feet for the computation. The mean discharge under "Water Year Summary" is an average of the monthly means. The maximum and minimum discharges are absolute instantaneous extremes that occurred during the year. The total acre-feet is the sum of the monthly acre-feet values.

The streamflow data reported herein are derived through the use of mechanical, arithmetical, and empirical operations and methods. The results are affected by inherent inaccuracies in procedures and equipment. It is, therefore, necessary to establish limits of accuracy for the reported data. The following is a listing of significant figures used in reporting streamflow data:

1. Daily flows - cubic feet per second

0.0 - 9.9 Tenths

10 - 99 2 significant figures

100 - up 3 significant figures

2. Means - cubic feet per second

0.0 - 99.9 Tenths

100 - 999 3 significant figures

1000 - above 4 significant figures

Water year totals are reported to a maximum of four significant figures.



TABLE B-1

## DAILY MAXIMUM AND MINIMUM TIDES

SACRAMENTO RIVER AT COLLINSVILLE

in feet

STATION NO.  
091110  
WATER YEAR  
1963

DATE	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DATE
1	19:22	19:24	19:29	19:33	19:37	19:37	19:38	19:39	19:39	19:39	19:39	19:39	1
2	19:22	19:24	19:28	19:32	19:36	19:37	19:38	19:39	19:39	19:39	19:39	19:39	2
3	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	3
4	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	4
5	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	5
6	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	6
7	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	7
8	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	8
9	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	9
10	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	10
11	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	11
12	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	12
13	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	13
14	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	14
15	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	15
16	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	16
17	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	17
18	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	18
19	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	19
20	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	20
21	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	21
22	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	22
23	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	23
24	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	24
25	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	25
26	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	26
27	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	27
28	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	28
29	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	29
30	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	30
31	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	31
1963	19:23	19:25	19:29	19:33	19:37	19:38	19:39	19:39	19:39	19:39	19:39	19:39	1963

E - Estimated  
NR - No RecordIn order to machine process the data in this table, it was necessary to avoid negative gage heights.  
Subtract 10.00 feet to obtain recorder gage height.

LOCATION			MAXIMUM			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T.B.R. M.O.B.M.	OF RECORD			DISCHARGE	GAUGE HEIGHT ONLY	PERIOD		ZERO ON GAUGE	REF. DATUM
			C.F.S.	GAUGE HT.	DATE			FROM	TO		
38°06'25"	121°51'18"	SW27 3N 1E		9.2	4/6/58		June 29-Date	1929	1929	0.00 -3.05	USED USCGS

Station located 0.4 mi. SW of Collinsville, 3.3 mi. NE of Pittsburg.  
Maximum gage height does not indicate maximum discharge.

TABLE B-1

## DAILY MAXIMUM AND MINIMUM TIDES

SUISUN BAY AT BENICIA ARSENAL

in feet

STATION NO	WATER YEAR
E03300	1963

DATE	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY.	JUNE.	JULY.	AUG.	SEPT.	DATE
1	12.85 8.33	12.91 8.52	12.87 8.98	12.81 9.32	12.70 9.13	12.90 9.37	12.87 9.09	12.89 9.59	12.99 8.96	13.20 8.33	13.56 8.01	13.49 7.65	1
2	13.04 8.39	12.80 7.50	12.70 7.39	12.71 8.91	13.87 8.19	13.11 7.39	12.41 8.94	12.70 7.97	12.99 8.44	13.32 7.99	13.63 7.85	13.57 7.58	2
3	12.96 8.28	12.57 8.52	12.72 8.66	13.08 7.79	14.39 8.09	12.90 7.00	12.24 8.70	12.17 8.15	13.01 7.88	13.45 7.48	13.70 7.38	12.84 8.15	3
4	12.87 8.10	12.38 7.53	12.36 8.52	12.77 8.00	14.39 7.89	12.66 8.40	12.24 7.10	12.90 8.47	13.23 7.60	13.55 7.41	12.25 7.58	13.67 7.97	4
5	12.75 10.29	12.25 7.52	12.43 7.29	13.44 7.65	14.41 7.54	12.87 8.47	12.71 7.51	13.08 8.23	13.49 7.49	12.07 7.51	13.66 7.36	13.51 8.08	5
6	12.72 8.01	12.39 7.36	12.68 7.70	13.62 7.39	14.38 7.40	13.02 8.18	12.94 7.77	12.93 7.80	12.43 7.30	13.70 7.22	13.66 7.38	13.23 8.15	6
7	12.54 7.78	12.57 7.37	13.13 7.61	NR	14.30 7.50	13.14 8.31	13.13 8.11	13.10 7.80	13.76 7.50	13.77 7.15	13.52 7.51	13.39 8.45	7
8	12.67 7.58	12.98 7.68	13.47 7.57	NR	14.40 7.60	13.16 7.21	13.11 8.21	13.28 7.55	13.84 7.24	13.70 7.03	13.24 7.48	13.53 8.10	8
9	12.88 7.54	13.49 8.17	13.79 7.98	NR	14.51 8.33	13.08 8.07	13.20 7.32	13.19 7.18	13.77 7.03	13.50 7.13	12.97 7.45	13.56 8.44	9
10	12.95 7.79	13.62 8.00	13.08 7.10	NR	14.30 8.28	12.87 7.45	13.27 7.99	13.01 7.13	14.05 7.37	13.29 7.23	13.20 6.19	13.54 8.08	10
11	13.68 7.96	13.70 7.35	14.00 7.19	NR	13.51 8.22	12.60 7.64	13.23 7.90	13.10 7.02	13.62 7.47	13.21 7.56	13.39 8.71	13.45 7.94	11
12	14.09 9.22	13.99 7.31	13.03 7.28	NR	13.14 8.07	12.30 7.17	13.35 7.63	12.49 7.09	13.36 7.18	13.09 7.03	13.42 7.45	13.38 7.80	12
13	14.25 9.66	13.91 7.34	13.68 7.02	NR	12.92 9.25	12.30 7.01	13.28 8.10	12.81 7.20	12.97 7.65	13.29 6.19	13.52 6.03	13.46 7.67	13
14	14.14 7.98	13.79 7.19	13.50 7.31	NR	12.79 9.55	12.50 8.26	13.44 8.98	12.66 7.38	12.99 7.72	13.62 6.59	13.65 7.44	13.60 7.75	14
15	14.07 7.77	13.29 7.22	12.95 7.62	NR	12.61 9.36	12.70 7.99	12.91 8.10	12.35 7.37	13.31 8.03	13.84 6.48	13.85 7.41	13.62 7.87	15
16	14.08 7.53	12.71 7.08	12.44 7.61	NR	12.71 9.21	13.05 8.43	12.53 8.40	12.38 7.50	13.71 8.47	13.91 8.15	14.01 7.51	13.48 8.00	16
17	14.07 7.66	12.07 9.98	12.11 8.93	NR	12.70 8.63	12.75 8.04	12.59 8.29	12.80 7.78	14.02 8.37	13.98 7.56	12.40 7.50	13.00 8.19	17
18	13.89 10.57	12.10 7.22	13.02 8.35	NR	12.71 8.01	12.09 7.49	13.07 7.90	13.21 7.77	12.45 7.98	14.13 7.29	13.86 7.44	13.35 8.43	18
19	13.60 9.74	12.07 7.07	12.69 8.09	12.50 7.92	12.89 8.51	12.05 7.52	13.15 7.71	13.67 8.54	14.20 7.61	12.37 7.12	13.66 7.49	13.09 8.51	19
20	12.77 7.86	12.24 7.55	12.71 8.71	12.59 7.48	13.14 7.09	12.22 8.99	13.27 7.67	13.96 8.08	14.42 7.31	14.12 7.02	13.39 7.52	NR	20
21	12.54 7.95	12.35 7.98	12.76 8.15	12.99 7.46	13.28 8.54	12.48 7.17	13.51 8.81	12.71 7.01	14.51 8.09	14.01 7.44	13.19 7.84	NR	21
22	12.58 8.37	12.48 7.30	13.00 7.88	13.14 8.25	13.45 8.94	13.39 7.59	13.75 8.35	14.10 8.49	14.31 8.73	13.91 7.16	13.19 8.38	NR	22
23	12.74 8.10	13.09 8.36	13.32 7.77	13.30 7.05	13.54 8.62	13.34 7.18	13.75 7.30	14.34 8.80	14.34 8.71	13.63 7.48	12.83 8.49	NR	23
24	12.78 8.18	12.95 7.75	13.44 7.41	13.55 7.07	13.32 8.75	12.97 8.90	13.75 7.15	14.40 8.49	13.70 8.72	13.14 7.41	12.75 8.49	NR	24
25	12.40 7.84	12.96 8.92	13.33 7.12	13.59 8.98	13.34 7.28	12.87 7.23	14.24 8.24	14.22 8.64	13.21 7.01	12.62 8.12	12.10 8.12	NR	25
26	12.84 8.13	13.31 7.83	13.42 7.02	13.53 7.02	12.95 7.12	13.05 7.57	14.05 7.05	13.88 8.40	14.90 7.52	12.85 8.12	12.71 8.76	NR	26
27	12.74 7.77	13.16 7.13	13.58 8.84	13.33 7.14	13.03 7.64	13.46 7.63	13.89 8.60	13.58 8.89	12.82 8.72	13.13 8.93	12.71 8.61	NR	27
28	12.73E 7.84	13.11 8.92	13.43 8.08	13.16 7.28	13.04 7.58	14.08 7.77	13.37 7.00	13.28 8.89	13.28 8.01	12.85 8.07	12.59 8.38	NR	28
29	12.97 7.57	12.94 8.84	13.17 8.76	12.48 8.36	13.69 9.20	13.52 7.18	12.50 7.43	12.83 7.96	12.96 8.82	13.28 8.61	13.34 8.07	NR	29
30	13.05 7.57	13.00 7.00	13.01 6.95	13.69 9.20	13.52 7.18	12.50 7.43	12.83 7.96	12.96 8.82	13.28 8.61	13.34 8.07	13.34 8.07	NR	30
31	12.98 7.44	12.98 7.44	12.98 7.44	12.98 7.44	12.98 7.44	12.98 7.44	12.98 7.44	12.98 7.44	12.98 7.44	12.98 7.44	12.98 7.44	12.98 7.44	31
NOV 1 (TIDE)	14.23E 7.44	13.99 8.88	14.00 8.88	14.25 NR	14.39 8.53	14.08 8.47	14.46 8.60	14.40 8.54	14.51 8.71	14.13 7.01	14.01 7.36	13.67 7.58	
NOV 1 (WIND)													
NOV 1 (WAVE)													

E - Estimated  
NR - No Record

\* In order to machine process the data in this table, it was necessary to avoid negative gage heights.  
Subtract 10.00 feet to obtain recorder gage height.

LOCATION			MAXIMUM			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T.B.R. M.D.B.M.	OF RECORD			DISCHARGE	GAUGE HEIGHT ONLY	PERIOD		ZERO ON GAUGE	REF DATUM
			C.F.S.	GAUGE HT.	DATE			FROM	TO		
38°02'26"	122°08'44"	SW6 2N 2W		6.72	3/5/62		Jun 29-Apr 60 Apr 40-Date	1929 1940 1942	1940 1962 1942	-2.21 -5.00 0.00	USCGS USCGS USCGS

Station located on inshore side of wharf, immediately SE of Benicia.  
Maximum gage height listed does not indicate maximum discharge.  
Period of record intermittent from 1929-1940.

DAILY MEAN DISCHARGE  
ARROYO DE LOS COCHES NEAR MILPITAS

DAY	IN SECOND FEET												DAY
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	
1	0.0	0.0	0.0	0.0	0.4*	0.0	0.3	0.1*	0.1	0.0	0.0*	0.0	1
2	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	
3	0.0*	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.1*	0.1	0.1	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	
6	0.0	0.0	0.0	0.0	0.0*	0.1	1.1	0.1	0.1*	0.0	0.0	0.0	6
7	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.1	0.1	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.1*	0.1	0.1*	0.1	0.1	0.1	0.0	0.0	0.0	11
12	0.0	0.0	0.0	0.0	1.0	0.0	0.1	0.1	0.1	0.0*	0.0	0.0	
13	0.0	0.0	0.0	0.0	2.4	0.0	0.2	0.1	0.1	0.0	0.0	0.0	
14	0.0*	0.0	0.0	0.0	0.5	0.1	1.8	0.1	0.1	0.0	0.0	0.0	
15	0.0	0.0	0.0	0.0	0.2	0.1	1.2	0.1	0.1	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.1	0.1	0.0	0.0	0.0	16
17	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	
19	0.0	0.0	0.0	0.0	0.0*	0.0	0.1	0.1	0.0	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0*	1.6	0.1	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.1	0.0	0.0	0.0	0.0	21
22	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0*	0.0	
23	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.0	
25	0.0	0.0*	0.0*	0.0	0.0	0.2	0.3	0.1	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	26
27	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.1	0.0	0.0	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0*	1.9	0.2	0.1	0.0	0.0	0.0	0.0	
29	0.0	0.0	0.0	0.0*	0.0	0.6	0.2	0.1	0.0	0.0	0.0	0.0	
30	0.0	0.0	0.1*	0.1	0.5	0.5	0.1	0.1	0.0	0.0*	0.0	0.0*	
31	0.0*	0.0	0.0	1.0	0.4	0.4	0.1	0.1	0.0	0.0	0.0	0.0	31
MEAN	0.0	0.0	0.0	0.0	0.2	0.2	0.4	0.1	0.1	0.0	0.0	0.0	MEAN
MAX	0.0	0.0	0.0	1.0	2.4	1.9	1.8	0.2	0.1	0.0	0.0	0.0	MAX
MIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	MIN
AC.FT.				2	11	13	24	6	3				AC.FT.

TOTAL  
ACRE- FEET  
60

Station located 200 ft. above Calaveras Road Bridge. 2.6 miles NE of Milpitas. Tributary to Coyote Creek via Penitencia Creek.  
Recorder installed Sep. 16, 1959. New control installed 7-27-60 with V-notch for small flows.

TABLE B-2

DAILY MEAN DISCHARGE  
BUTANE CREEK IN PESCADERO

STATION NO.	GAGE YEAR
103200	1963

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	DAY
1	0.0E	0.2	0.2	0.1	332	25.	46	40	14	0.9	2.7	3.9	1
2	0.0E	0.4	0.4	7.0	167	24	40	37	14	0.4	3.0	2.0	2
3	0.0	9.0	1.0	7.6	107	22	36	36	13	3.9	3.0	2.3	3
4	0.7	9.0	1.2	7.2	90	21	38	34	13	3.3	3.0	2.6	4
5	0.7	4.3	1.4	6.0	73	19	21	32	13	3.1	3.1	2.9	5
6	9.7	3.7	1.7	6.6	47	19	69	31	13	4.9	2.9	3.9	6
7	0.7	3.4	2.1	6.4	42	18	106	29	11	4.9	2.7	3.2	7
8	0.2	3.4	2.6	6.0	37	18	48	29	11	4.2	3.9	3.4	8
9	0.3	3.1	3.1	3.8	126	17	39	27	11	4.1	3.0	3.2	9
10	1.4	2.4	3.7	3.6	209	17	23	36	10	4.0	3.0	3.0	10
11													11
12	4.1	2.3	4.3	3.4	118	17	27	26	9.4	3.3	2.4	3.2	12
13	35	2.3	3.4	3.4	109	17	26	29	9.1	3.4	3.6	3.7	13
14	600	2.1	7.7	3.4	223	17	26	22	9.3	3.1	3.7	3.6	14
15	241	1.0	8.9	3.4	186	17	90	20	10	3.4	3.3	3.4	15
16	63	1.0	30	3.4	103	17	107	19	11	4.3	3.2	3.3	16
17													17
18	39	1.4	0.9	3.4	67	33	81	10	11	4.4	3.1	3.8	18
19	29	1.4	134	3.4	79	22	66	10	11	4.0	3.4	3.2	19
20	13	1.4	90	3.4	64	10	87	17	10	3.9	3.9	3.4	20
21	16	1.2	33	3.2	54	17	97	17	9.7	3.9	3.9	2.0	21
22	14	1.1	41	3.0	40	17	06	17	9.3	2.7	3.2	3.0	22
23													23
24	13	1.1	36	3.8	43	16	79	10	9.1	3.4	3.4	3.1	24
25	11	0.9	23	4.9	39	19	60	13	9.4	3.2	3.4	3.4	25
26	11	0.7	32	4.3	36	13	61	13	7.7	3.1	3.6	3.3	26
27	9.7	0.3	31	4.3	39	19	50	13	7.1	2.6	3.7	3.2	27
28	9.0	0.3	31	4.3	31	10	33	13	8.04	3.00	4.1	3.3	28
29													29
30	0.3	0.3	31	4.3	29	10	32	13	7.9	3.00	4.1	2.9	30
31	0.1	1.70	23	4.3	27	49	47	19	6.2	2.8	3.0	2.0	31
32	7.0	0.3	20	4.2	36	100	44	19	3.7	2.9	2.0	2.0	32
33	7.2	0.2	13	4.0	81	36	13	19	3.7	2.8	3.2	2.9	33
34	6.0	0.2	11	3.9	39	54	13	13	2.4	2.9	3.0	2.2	34
35	2.6			3.9	22			13	2.7	2.7	2.0		35
MEAN	46.0E	2.2	39.0	46.3	97.9	29.9	36.6	22.1	9.7	3.9	3.2	3.1	MEAN
MAX	685	6.2	134	804	332	180	197	400.0	14.0	6.9	4.1	3.7	MAX
MIN	3	0.2	0.2	4.3	26.0	10.0	31.0	19.0	2.6	2.0	2.7	2.0	MIN
ACFT	2419	120	1222	1722	2517	1027	3266	1227	278	242	199	102	ACFT

## WATER YEAR SUMMARY

E - Estimated  
NR - No Record  
O - Discharge measurement or observation  
of no flow made on this day.  
S - E and O

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE-Feet
28.25	1340	14.21	1	31	1350	0.0	5.12	6	30	0740	20000

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T.B.R. M.O.B.B.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF DATUM
			C.F.S.	GAGE HT.	DATE			FROM	TO		
37° 13' 49"	122° 21' 51"	SW14 8S 4W	1340	16.21	1/31/63	June 62-Date	June 62-Date	1962		0.00	Local

Station located 1.7 mi. SW intersection Pescadero Road and Old Stage Road in Pescadero.  
Tributary to Pescadero Creek. Recorder installed June 22, 1962.



## APPENDIX C

### GROUND WATER MEASUREMENT





## GROUND WATER MEASUREMENT

This appendix includes two tables. Table C-1 "Description of Selected Wells", provides a description of 213 wells for which ground water level data are presented in Table C-2, "Ground Water Levels at Wells". A description of the items in the tables follows.

### DESCRIPTION OF SELECTED WELLS

Table C-1, "Description of Selected Wells", is arranged in region, basin, and well number order. The water pollution control board regions used in this report and shown on Plate 2, "Ground Water Basins or Units in the Central Coastal Area", are geographic areas defined in Section 13040 of the Water Code. The regions, ground water basins, or units and subareas are listed by a numbering system as follows:

	1 - 18.01
Region (North Coastal Region)_____	
Ground Water Basin or Unit (Santa Rosa Valley)_____	
Subarea (Santa Rosa Area)_____	

### State Well Number

The state well numbering system used in this report is based on the township, range, and section subdivision of the Public Land Survey. It is the system used in all ground water investigations made by the Department of Water Resources. In this report, the number of a well, assigned in accordance with this system, is referred to as the State Well Number. Under the system each section is divided into 40-acre tracts lettered as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Wells are numbered within each 40-acre tract according to the chronological sequence in which they have been assigned State Well Numbers. For example, a well which has the number 16N/12W-17K,M would be in Township 16 North, Range 12 West, Section 17, Mount Diablo Base and Meridian and would be further designated as the first well assigned a State Well Number in Tract K.

#### Agency Well Number

The agency well number is the number assigned to a well by any agency other than the Department of Water Resources in accordance with the numbering system used by that agency. Agencies that use the state well numbering system normally coordinate assignment of well numbers with the Department. These numbers, when common, are not shown in the "Agency Well Number" column; when different, the last five digits are shown in the "Agency Well Number" column.

#### Agency Supplying Data

Each number in this column is the code number for a cooperating agency. The agency code consists of a five digit number, the first of which

is a region number. Thus, 32100 refers to Agency 2100 in Region 3. Because of the limitations of punch-card space, the agency code has been shown as a four digit number without the region number. Therefore, the four digit agency code should always be referred to the region in which the well is located.

The first digit of the four digit agency code, as listed below, designates the type of well numbering system used by the agency.

<u>Code</u>	<u>Well Numbering System</u>
1	Location numbers
2	Monterey County Flood Control and Water Conservation District or Santa Clara Valley Water Conservation District
3	Serial numbers
4	Local numbers
5	State or U. S. Geological Survey
6	U. S. Bureau of Reclamation
7	South San Joaquin Irrigation District

The last three digits of the agency code, as listed below, are numbers that designate, within specified limits, the type of agency from which the data were obtained.

<u>Code</u>	<u>Type of Agency</u>
000-049	Federal
050-099	State
100-199	County
200-399	Municipal
400-699	District - Water, Irrigation, Conservation, etc.
700-999	Private

The agencies and code numbers assigned to them in each of the regions are listed in the following tabulation:

Agency Code	:	Agency
<u>North Coastal Region</u>		
5000		U. S. Geological Survey
5050		Department of Water Resources
<u>San Francisco Bay Region</u>		
2400		Santa Clara Valley Water Conservation District
5000		U. S. Geological Survey
5050		Department of Water Resources
5100		Alameda County Flood Control and Water Conservation District
5101		Napa County
5109		Solano County
5401		Alameda County Water District
<u>Central Coastal Region</u>		
2100 and 5100	<u>1/</u>	Monterey County Flood Control and Water Conservation District
2400		Santa Clara Valley Water Conservation District
5050		Department of Water Resources
5101		San Benito County
5102		Santa Cruz County
5400		South Santa Clara Valley Water Conservation District

1/ In the Paso Robles subbasin of Salinas Valley (3-4.06), this agency number refers to the San Luis Obispo County Flood Control and Water Conservation District.

### Well Use

The well use is indicated as follows:

<u>Code</u>	<u>Well Use</u>
1	Domestic
2	Irrigation
3	Municipal
4	Industrial
5	Injection
6	Drainage
7	Domestic and Irrigation
8	Test
9	Stock
0	Unused

### Well Depth in Feet

Well depths shown were reported by the owner, obtained from a driller's log, or measured at the time of the well canvass.

### Data Available

Under this heading, code numbers, as listed below, indicate the type of data that are available with respect to well logs, water analyses, and production records.

<u>Data</u>	<u>Code</u>
Log record	
Log	1
Confidential log (Sec. 7076, Water Code)	2
Water Analyses	
Mineral	

<u>Data</u>	<u>Code</u>
Water Analyses	
Sanitary	2
Heavy Metals	3
Mineral and Sanitary	4
Production record	
Available	1
Pump test available	2

#### Record Begins and Record Ends

The last two digits of the year the record began or ended are shown.

#### GROUND WATER LEVELS AT WELLS

Table C-2, "Ground Water Levels at Wells", is arranged in region, basin, well number, and date order. It includes measurements of depths to water in wells made from July 1, 1962 through June 30, 1963. Table headings discussed below are only those that were not discussed under "Description of Selected Wells".

#### Ground Surface Elevation in Feet

The numbers in this column give the elevation in feet above mean sea level (USC&GS datum) of the ground surface from which depth to water is measured. Elevations of ground surface are usually taken from topographic maps and the accuracy is controlled by topographic standards.

#### Date

The date shown in the column is the date on which the depth measurement, shown in the next column, was made.

### Ground Surface to Water Surface in Feet

This is the measured depth in feet from the ground surface to the water surface in the well. Certain of the depth measurements in the column may be followed with an asterisk which indicates a questionable measurement. Depth to ground water measurements may be questionable for such reasons as (a) well being pumped while undergoing measurement, (b) nearby pump operating, (c) casing leaking or wet, (d) well pumped recently, (e) air gauge measurement, or, (f) recharge operation at well or nearby. The specific reason for any asterisk on any given measurement may be obtained from the Department of Water Resources.

Other symbols used are:

Measurement discontinued	#
Well destroyed	@
No measurement for other reasons	□

### Water Surface Elevation in Feet

This is the elevation in feet above mean sea level (USC&GS datum) of the water surface in the well. It was derived by subtraction of the depth measurement from the ground surface elevation.

The words FLOW and DRY are shown in this column to indicate a flowing or a dry well.

### Agency Supplying Data

Each number in this column is the code number for the agency from which the water level data were obtained.



TABLE C-1

## DESCRIPTION OF SELECTED WELLS

STATE WELL NUMBER	AGENCY WELL NUMBER	AGENCY SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	DATA AVAILABLE			RECORD BEGINS	RECORD ENDS
					LOG	WATER ANAL.	PROD. REC.		

STATE WELL NUMBER	AGENCY WELL NUMBER	AGENCY SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	DATA AVAILABLE			RECORD BEGINS	RECORD ENDS
					LOG	WATER ANAL.	PROD. REC.		

## NORTH COASTAL REGION

## POTTER VALLEY

1-14.00

17N/11W-18J01 M 5000 1 35 51

17N/11W-32J01 M 5000 1 12 51

## UKIAH VALLEY

1-15.00

15N/12W-08L01 M 5000 1 62 51

15N/12W-21M01 M 5000 7 46 51

15N/12W-35M01 M 5000 2 190 51

## HOPLAND VALLEY

1-16.00

13N/11W-18E01 M 5000 7 52 53

13N/11W-19P01 M 5000 2 44 53

13N/11W-20G01 M 5000 1 135 53

## ALEXANDER VALLEY

1-17.00

10N/09W-18B01 M 5000 2 180 50

10N/09W-26L02 M 5000 1 40 50

10N/09W-33C01 M 33B01 5000 1 20 50

11N/10W-08P01 M 5000 1 30 51

11N/10W-17P02 M 5000 2 36 53

11N/10W-19F02 M 5000 1 334 52

## SANTA ROSA VALLEY

1-18.00

## SANTA ROSA AREA

1-18.01

6N/08W-07P02 M 5000 7 120 45

6N/08W-13R01 M 5000 1 250 42

7N/07W-06R01 M 5050 7 133 51

## SANTA ROSA AREA

1-18.01

7N/09W-35D02 M 5050 1 167 50

8N/09W-36N01 M 5000 0 89 49

## HEADSBOURG AREA

1-18.02

8N/09W-03P01 M 5000 1 110 50

8N/09W-22L01 M 5000 1 44 51

9N/09W-28N01 M 5000 2 53 53

10N/10W-35Q01 M 5000 0 285 54

## LOWER RUSSIAN RIVER VALLEY

1-98.00

7N/10W-06N01 M 7D01 5000 3 120 58

7N/11W-14E01 M 5000 1 47 51

# DESCRIPTION OF SELECTED WELLS

STATE WELL NUMBER	AGENCY WELL NUMBER	AGENCY SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	LOG	WATER ANAL.	PROD REC	RECORD ENDS
-------------------------	-----------------------	-----------------------------	-------------	--------------------------	-----	----------------	-------------	----------------

STATE WELL NUMBER	AGENCY WELL NUMBER	AGENCY SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	LOG	WATER ANAL.	PROD REC	RECORD ENDS
-------------------------	-----------------------	-----------------------------	-------------	--------------------------	-----	----------------	-------------	----------------

## SAN FRANCISCO BAY REGION

### PETALUMA VALLEY

2-01.00

3N/06W-01001 M	5050 1	225	50
5N/07W-20802 M	5000 9	158	53
5N/07W-21H01 M	5000 1	92	59
5N/07W-26R01 M	5000 0	428	50
5N/07W-35K01 M	5050 2	78	49

### NAPA-SONOMA VALLEY

2-02.00

4N/04W-13E01 M	5000 9	98	30
5N/04W-11M01 M	5000 1	59	50
6N/04W-17A01 M	5000 0	250	49
7N/05W-09D01 M	5101 2	333	49
7N/05W-09D02 M	5000 0	232	49
7N/05W-09D03 M	5101 1	25	49
7N/05W-23D02 M	5101 2	129	49
8N/06W-10D01 M	5000 9	184	49

### SONOMA VALLEY

2-02.02

5N/05W-17C01 M	5000 1	70	50
5N/05W-28N01 M	5050 2	130	46
5N/05W-29N01 M	5000 2	100	51

### SUISUN-FAIRFIELD VALLEY

2-03.00

4N/02W-06A01 M	5109 0	39	20
4N/02W-09A01 M	5109 0	37	48
4N/03W-01D01 M	5109 1	67	18

### SUISUN-FAIRFIELD VALLEY

2-03.00

5N/01E-36A01 M	5109 9	38	29
5N/01W-07E01 M	5109 9	33	48
5N/01W-28P01 M	5109 1	40	49
5N/02W-17D02 M	5109 2	70	48
5N/02W-27J02 M	5000 0	60	49
5N/02W-29R01 M	5109 2	120	49
5N/02W-30J01 M	5000 2	220	49
5N/03W-26F02 M	5109 1	282	18

### YGNACIO VALLEY

2-06.00

1N/01W-07K01 M	5050 1		58
1N/02W-11N01 M	5050 1	81	2
2N/02W-27R01 M	5050 1	131	58
2N/02W-36E01 M	5050 1	40	58

### SANTA CLARA VALLEY

2-09.00

### SOUTH ALAMEDA COUNTY UPR AQUIFER

2-09.01

35/02W-08R05 M	5100 1	85	50
35/03W-24D02 M	5100 9	80	49
45/01W-18G01 M	5401 4	160	58
45/01W-22P05 M	5100 2	180	48
45/01W-29C04 M	5401 0	145	50
45/02W-13C02 M	5401 2	180	49
45/02W-24D02 M	5100 2		49
55/01W-04F01 M	5401 0	97	57
55/01W-09Q01 M	5100 9	60	50

TABLE C-1

DESCRIPTION OF SELECTED WELLS

STATE WELL NUMBER	AGENCY WELL NUMBER	SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	LOG	DATA AVAILABLE		RECORD RECEIVED	ENDS
						WATER ANAL.	PRD REC		
SOUTH ALAMEDA COUNTY LWR AQUIFER									
2-09*01									
2S/03W-36R01 M		5100 2	601					59	
3S/02W-07D01 M		5100 0						49	62
3S/02W-19A02 M		5050 0	218					50	
3S/03W-24J01 M		5100 7	511					49	
4S/02W-02D01 M		5100 2	475					50	
4S/02W-35R02 M		5401 7	224 2					58	
4S/02W-36K01 M		5401 0	241					49	
5S/01W-09W01 M		5100 2	297 1					49	
NORTH SANTA CLARA COUNTY									
2-09*02									
6S/01E-07E01 M	5C 059	2400 0	525					36	
6S/01E-21R01 M	8D 342A	2400 2	560 2					51	
6S/01E-23P02 M	8C 127	2400 0	295					36	
6S/01E-30M01 M	7E 084	2400 7	250					30	
6S/01W-10P02 M		5000 8	410					58	
6S/01W-23E01 M		5000 2	425					58	
6S/02W-16R01 M	2G 005	2400 2						36	
6S/02W-25C01 M	4F 030	2400 1	500					30	
6S/02W-35C01 M	3G 020	2400 2	480					30	
7S/01E-01K01 M	9D 180A	2400 7	400					36	
7S/01E-08L01 M	8F 274	2400	235					36	
7S/01E-09D02 M	8E 120	2400 3						36	
7S/01E-16C05 M		5000 3	908					58	
7S/01E-31A02 M	9G 148	2400 2						36	
7S/01E-31R01 M	9G 147A	2400	400					50	

STATE WELL NUMBER	AGENCY WELL NUMBER	SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	DATA			RECORD RECEIVED	ENDS
					LOG	WATER ANAL.	PROD REC.		
NORTH SANTA CLARA COUNTY									
2-09*02									
7S/02E-07P01 M	10D 403	2400 3	525					57	
7S/02E-17H01 M	11D 304	2400	400					31	
7S/02E-33C01 M	12E 398	2400	61					55	
7S/01W-35C01 M	8H 117	2400 3	438					36	
7S/02W-03G01 M	4H 023A	2400 2	800					36	
7S/02W-04B01 M	3H 013	2400 2	450					36	
7S/02W-22A01 M	4I 037	2400 2	620					36	
8S/01E-07H02 M	9H 166A	2400	350					54	
8S/01E-13H01 M	12G 257	2400 7	110					36	
8S/02E-20F03 M	13G 297	2400						40	
8S/02E-22D01 M	13F 233	2400 7						36	
8S/01W-15B01 M	8I 129	2400	64					36	
9S/02E-01J01 M	15G 238B	2400 7	135					36	
9S/02E-01M01 M	15G 279	2400	114					37	
LIVERMORE VALLEY									
2-10*00									
2S/02E-25N01 M		5100						48	
2S/01W-26C01 M		5100 2	360					48	
3S/01E-02E01 M		5100						48	
3S/01E-11H01 M		5100 7	303					49	
3S/02E-02R01 M		5100 2	437 1					48	
3S/02E-10H01 M		5100 2	376					48	

# DESCRIPTION OF SELECTED WELLS

STATE WELL NUMBER	AGENCY WELL NUMBER	SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	DATA AVAILABLE		RECORD RECORDS	RECORD RECORDS	ENDS
					LOG	WATER ANAL.			

## HALF MOON BAY TERRACE

5S/05W-20L01 M	5050 0	69	2-22.00	53
5S/05W-29F03 M	5050 1			53
5S/05W-29N01 M	5050 2	82		53
6S/05W-06B01 M	5050 2	85		53

## SAN GREGORIO VALLEY

7S/05W-13E01 M	5050 0	45	2-24.00	58
7S/05W-15C01 M	5050 2	85		58
7S/05W-15E01 M	5050 7			53
7S/05W-15E02 M	5050 1			53
7S/05W-15H02 M	5050 1			60

## PESCADERO VALLEY

8S/05W-09H01 M	5050 2		2-26.00	53
8S/05W-11M01 M	5050 1	36		53

## CENTRAL COASTAL REGION

### SOQUEL VALLEY

11S/01W-09L01 M	5050 0		3-01.00	48
11S/01W-15H01 M	5050 0			48

### PAJARO VALLEY

12S/01E-24G01 M	5050 2	200	3-02.00	47
12S/02E-16J01 M	5050 2			47
12S/02E-31K01 M	5050 2	219		47
13S/02E-05B01 M	5050 0	225		58

### GILROY-HOLLISTER VALLEY

### SOUTH SANTA CLARA COUNTY

9S/03E-27C02 M	2400 7	300	3-03.01	43
9S/03E-29B01 M	5050 0	170		48
10S/03E-34L01 M	5050 2	1		48
10S/04E-18G02 M	5050 7	184		48
10S/04E-35E01 M	5050 2	447		48
11S/03E-01B01 M	5400 2			57

### SAN BENITO COUNTY

11S/05E-13D01 M	5050 2	125	3-03.02	2
12S/04E-20C01 M	5101 2	736		49
12S/05E-12F01 M	5050 0	88		51
12S/05E-33A01 M	5050 2	150		24
13S/05E-11Q01 M	5101 0	44		24

TABLE C-1

## DESCRIPTION OF SELECTED WELLS

STATE WELL NUMBER	AGENCY WELL NUMBER	AGENCY SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	LOG	WATER ANAL.	DATA AVAILABLE	RECORD REC	RECORD ENDS
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## SALINAS VALLEY

3-04.00

## PRESSURE AREA 180 FOOT AQUIFER

3-04.01

14S/02E-03C01 M 2B 001 2100 2

31

14S/02E-15L01 M 2C 025A 2100 2 176

16

15S/02E-01O01 M 2D 023 2100 7 196 1

31

15S/03E-16M01 M 3D 040 2100 2

31

15S/04E-33A01 M 4D 056 2100 2 279 1

31

16S/04E-11D01 M 4E 030D 2100 1

31

## PRESSURE AREA 400 FOOT AQUIFER

3-04.01

13S/02E-31O01 M 1B 011A 2100 2 500 1

31

14S/03E-18J01 M 2C 119 2100 2 513 1

31

## EAST SIDE AREA

3-04.02

16S/05E-17R01 M 5E 026 2100 2 299

16

## FOREBAY AREA

3-04.03

17S/05E-11C01 M 6F 017 2100 2 238 1

31

## ARROYO SECO CONE

3-04.04

18S/06E-15M01 M 7G 029 2100 2 288 1

31

19S/06E-11C01 M 7H 036 2100 2 320

44

## UPPER VALLEY AREA

3-04.05

19S/07E-10P01 M 8H 031 2100 2 245

31

20S/08E-05R01 M 9I 004 2100 2 372

16

21S/09E-06K01 M 10J 001 2100 2

16

21S/10E-32N01 M 11K 002 2100 2

31

22S/10E-16K01 M 12K 003 2100 2

31

STATE WELL NUMBER	AGENCY WELL NUMBER	AGENCY SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	LOG	WATER ANAL.	DATA AVAILABLE	RECORD REC	RECORD ENDS
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## PASO ROBLES

3-04.06

24S/10E-11C01 M 5100

24S/11E-25N01 M 5100

24S/11E-33R01 M 5100

24S/11E-35J01 M 5100

24S/12E-17N01 M 5100

24S/15E-33C01 M 5100

25S/11E-35G01 M 5100

25S/12E-17J01 M 5100

25S/12E-17R01 M 5100

25S/12E-26K01 M 5100

25S/13E-11E01 M 5100

25S/16E-17L01 M 5100

25S/16E-30M01 M 5100

26S/12E-04N01 M 5100

26S/12E-26E01 M 5100

26S/12E-35M01 M 5100

26S/13E-10D01 M 5100

26S/13E-34B01 M 5100

26S/14E-16L01 M 5100

26S/14E-35D01 M 5100

26S/15E-02B01 M 5100

26S/15E-28Q02 M 5100

26S/15E-29N01 M 5100

# DESCRIPTION OF SELECTED WELLS

STATE WELL NUMBER	AGENCY WELL NUMBER	AGENCY SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	LOG	WATER ANAL.	PROD REC.	RECORD BEGIN	RECORD ENDS
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3-04.06

PASO ROBLES

27S/13E-24N01 M 5100

27S/13E-32B01 M 5100

27S/18E-10R02 M 5100

27S/18E-13A01 M 5100

27S/18E-21E02 M 5100

28S/12E-10G01 M 5100

28S/12E-10R02 M 5100

28S/12E-13N01 M 5100

28S/12E-14G01 M 5100

28S/13E-04K01 M 5100

28S/13E-04K02 M 5100

28S/14E-07E01 M 5100

28S/16E-23M01 M 5100

29S/13E-05F03 M 5100

29S/13E-05K02 M 5100

29S/13E-06A01 M 5100

29S/13E-19H01 M 5100

CARMEL VALLEY

3-07.00

16S/01E-25B01 M 5050 7 60 52

WEST SANTA CRUZ TERRACE

3-26.00

11S/02W-22K01 M 5050 2 54

STATE WELL NUMBER	AGENCY WELL NUMBER	AGENCY SUPPLYING DATA	WELL USE	WELL DEPTH IN FEET	LOG	WATER ANAL.	PROD REC.	RECORD BEGIN	RECORD ENDS
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TABLE C-2  
GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD. SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
NORTH COASTAL REGION					
POTTER VALLEY					
1-14+00					
17N/11W-18J01 M	955+0	7-23-62	1+0	954+0	5000
		8-20-62	1+4*	953+6	
		9-18-62	8	954+2	
		10-25-62	3	955+3	
		11-26-62	8	955+8	
		12-20-62	8	955+8	
		1-21-63	7	955+7	
		2-18-63	FLOW		
		3-19-63	FLOW		
		4-23-63	FLOW		
		5-20-63	7	955+7	
		6-18-63	4	954+6	
17N/11W-32J01 M					
	895+0	7-23-62	5+1*	889+9	5000
		8-20-62	2+1*	892+9	
		9-18-62	6	894+4	
		10-25-62	1+3	893+7	
		11-00-62	□		
		12-20-62	1+6	893+4	
		1-21-63	1+9	893+1	
		2-18-63	4+9	894+1	
		3-19-63	1+5	893+5	
		4-23-63	7	894+3	
		5-20-63	2+3	892+7	
		6-18-63	3+6	891+4	
UKIAH VALLEY					
1-15+00					
15N/12W-08L01 M	665+0	7-12-62	22+9	642+1	5000
		8-16-62	24+5	640+5	
		9-07-62	22+3	642+7	
		10-10-62	24+0	641+0	
		11-15-62	21+1	643+9	
		12-04-62	20+4	644+6	
		1-03-63	17+6	647+4	
		2-13-63	15+7	649+3	
		3-06-63	17+2	647+8	
		4-17-63	14+3	650+7	
		5-14-63	17+5	647+5	
		6-07-63	19+0	646+0	
15N/12W-21M01 M					
	590+0	7-12-62	8+3	581+7	5000
		8-16-62	12+9	577+1	
		9-07-62	13+5	576+5	
		10-10-62	13+6	576+4	
NORTH COASTAL REGION					
UKIAH VALLEY					
1-15+00					
15N/12W-21M01 M	590+0	11-15-62	9+0	581+0	5000
		12-04-62	5+9	584+1	
		1-03-63	2+4	587+6	
		2-13-63	5	589+5	
		3-06-63	1+2	588+8	
		4-17-63	5	589+5	
		5-14-63	1+4	588+6	
		6-07-63	2+7	587+3	
15N/12W-35M01 M					
	600+0	7-12-62	□		5000
		8-16-62	□		
		9-07-62	9+8	590+2	
		10-01-62	□		
		11-15-62	10+2	589+8	
		12-04-62	5+8*	594+2	
		1-03-63	6+4	593+6	
		2-13-63	2+9	597+1	
		3-06-63	4+2	595+8	
		4-17-63	2+0	598+0	
		5-14-63	3+5	598+5	
		6-07-63	4+5	593+5	
HOPLAND VALLEY					
1-16+00					
13N/11W-18E01 M	490+0	7-12-62	□		5000
		8-16-62	□		
		9-07-62	□		
		10-10-62	12+1	477+9	
		11-15-62	11+4	478+6	
		12-04-62	9+8	480+2	
		1-03-63	11+1	478+9	
		2-13-63	7+7	482+3	
		3-06-63	11+0	479+0	
		4-17-63	5+9	484+1	
		5-14-63	9+7	480+3	
		6-07-63	11+6	478+4	
13N/11W-19P01 M					
	488+0	7-12-62	16+0	472+0	5000
		8-16-62	18+2	469+8	
		9-07-62	18+3	469+7	
		10-10-62	13+2	474+8	
		11-15-62	7+5	480+5	
		12-04-62	9+5	478+5	
		1-03-63	7+9	480+1	



## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
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## NORTH COASTAL REGION

## HOPLAND VALLEY

1-16.00

13N/11W-19P01 M  
CONT.

488.0

3-06-63 11.3  
4-17-63 6.0  
5-14-63 9.1  
6-07-63 12.1476.7  
482.0  
478.9  
475.9

5000

1-17.00

## ALEXANDER VALLEY

180.0

7-11-62 7.5  
8-16-62 8.5  
9-06-62 8.7  
10-10-62 9.0  
11-15-62 6.6  
12-04-62 6.6  
1-03-63 5.7  
2-13-63 1.6  
3-06-63 5.6  
4-16-63 1.8  
5-13-63 4.6  
6-06-63 7.3172.5  
171.5  
171.3  
171.0  
173.4  
173.4  
174.3  
178.4  
174.4  
178.2  
175.4  
172.7

5000

## NORTH COASTAL REGION

## ALEXANDER VALLEY

180.0

7-11-62 7.5  
8-16-62 8.5  
9-06-62 8.7  
10-10-62 9.0  
11-15-62 6.6  
12-04-62 6.6  
1-03-63 5.7  
2-13-63 1.6  
3-06-63 5.6  
4-16-63 1.8  
5-13-63 4.6  
6-06-63 7.3172.5  
171.5  
171.3  
171.0  
173.4  
173.4  
174.3  
178.4  
174.4  
178.2  
175.4  
172.7

5000

C-17

## ALEXANDER VALLEY

1-17.00

10N/09W-18B01 M

230.0

7-11-62 11.3  
8-16-62 10.6  
9-06-62 10.6  
10-10-62 10.6  
11-15-62 10.6  
12-04-62 18.3  
1-03-63 17.6  
2-13-63 13.4  
3-06-63 17.0  
4-16-63 12.6  
5-13-63 16.8  
6-06-63 19.7209.8  
208.4  
210.4  
211.7  
212.4  
216.6  
213.0  
217.4  
213.2  
210.3

5000

1-17.00

## ALEXANDER VALLEY

305.0

7-11-62 13.1  
8-16-62 13.0  
9-07-62 12.8  
10-10-62 12.8  
11-15-62 11.0  
12-04-62 10.8  
1-03-63 9.7  
2-13-63 4.4  
3-06-63 8.6  
4-17-63 3.4  
5-14-63 8.4  
6-07-63 11.0291.9  
292.0  
292.2  
292.2  
294.0  
294.2  
295.3  
300.6  
296.4  
301.6  
296.6

5000

10N/09W-26L02 M

205.0

7-11-62 13.9  
8-16-62 18.0  
9-06-62 18.0  
10-10-62 20.7  
11-15-62 11.8  
12-04-62 11.0  
1-03-63 4.5  
2-13-63 4.9  
3-06-63 1.6  
4-16-63 3.3  
5-14-63 4.9  
6-06-63 11.0191.1  
187.0  
184.3  
193.2  
194.0  
200.5  
204.1  
203.4  
204.7  
204.1

5000

1-17.00

## ALEXANDER VALLEY

346.0

7-12-62 9.1  
8-16-62 11.6  
9-07-62 11.6  
10-10-62 13.1  
11-15-62 11.0  
12-04-62 5.5336.9  
334.4  
332.9  
340.5

5000

TABLE C-2

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
NORTH COASTAL REGION						NORTH COASTAL REGION					
ALEXANDER VALLEY						SANTA ROSA AREA					
11N/10W-19F02 M	346.0	1-03-63	□	343.6	5000	8N/09W-36N01 M	90.0	9-04-62	12.0	78.0	5000
CONT.		2-13-63	2.4	342.6		CONT.		10-09-62	12.6	77.4	
		3-06-63	3.4	342.6				11-14-62	11.6	77.4	
		4-17-63	.6	345.4				12-03-62	11.2	78.8	
		5-14-63	3.3	342.7				1-02-63	9.1	80.9	
		6-07-63	5.5	340.5				2-12-63	3.4	86.6	
1-17.00						1-18.01					
1-18.00						1-18.01					
SANTA ROSA VALLEY						HEALDSBURG AREA					
SANTA ROSA AREA						1-18.02					
6N/08W-07P02 M	95.0	7-10-62	26.7	68.3	5000	8N/09W-03P01 M	77.0	7-11-62	□	71.3	5000
		8-14-62	27.5	67.5				8-15-62	5.7	71.3	
		9-04-62	26.1	68.9				9-06-62	3.4	73.6	
		10-09-62	25.5	69.5				10-10-62	5.4	71.6	
		11-14-62	19.8	75.2				11-14-62	□		
		12-03-62	20.7	74.3				12-03-62	□		
		1-02-63	16.0	79.0				1-03-63	□		
		2-12-63	15.2	79.8				2-12-63	□		
		3-05-63	19.5	75.5				3-05-63	2.3	74.7	
		4-16-63	12.1	82.9				4-16-63	□		
		5-13-63	□					5-13-63	□		
		6-06-63	13.1	81.9	5000			6-06-63	5.5	71.5	5000
6N/08W-13R01 M	115.0	7-10-62	20.1	94.9		8N/09W-22L01 M	67.0	7-11-62	□		
		8-14-62	22.5*	92.5				8-15-62	□		
		9-04-62	24.3	90.7				9-06-62	27.6	39.4	
		10-09-62	24.2	90.8				10-10-62	□		
		11-14-62	23.8	91.2				11-14-62	26.7	40.3	
		12-03-62	21.4	93.6				12-03-62	26.0	41.0	
		1-02-63	19.7	95.3				1-03-63	25.3	41.7	
		2-12-63	16.9	98.1				2-12-63	21.3	45.7	
		3-05-63	16.9	98.1				3-05-63	23.5	43.5	
		4-16-63	13.8	101.2				4-16-63	20.1	46.9	
		5-13-63	12.1	102.9				5-13-63	22.8	44.2	
		6-06-63	13.6	101.4				6-06-63	23.9	43.1	
7N/07W-06R01 M	275.0	4-12-63	14.1	260.5	5050	9N/09W-28N01 M	90.0	7-11-62	18.5	71.5	5000
7N/08W-31C01 M	85.0	4-12-63	8.8	76.2	5050			8-15-62	20.6	69.4	
7N/09W-35D02 M	135.0	4-12-63	32.0	103.0	5050			9-06-62	21.4	68.6	
								10-10-62	21.8	68.2	
								11-14-62	15.0	75.0	

# GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
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## NORTH COASTAL REGION

### LOWER RUSSIAN RIVER VALLEY

7N/11W-14E01 M	25.0	5-13-63	16.6	8.4	5000
CONT.		6-06-63	18.4	6.6	

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
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## NORTH COASTAL REGION

### HEALDSBURG AREA

1-18.02

9N/09W-28N01 M	90.0	1-03-63	13.8	76.2	5000
CONT.		2-13-63	10.8	79.2	
		3-05-63	13.8	76.2	
		4-16-63	10.7	79.3	
		5-13-63	13.6	76.4	
		6-06-63	14.2	75.8	
10N/10W-35001 M	142.0	7-00-62	□	136.9	5000
		8-15-62	5.1	135.4	
		9-06-62	6.6	135.4	
		10-10-62	6.8	135.2	
		11-15-62	5.3	136.7	
		12-08-62	4.9	137.1	
		1-03-63	2.3	139.7	
		2-13-63	1.1	140.9	
		3-05-63	1.8	140.2	
		4-16-63	1.2	140.8	
		5-13-63	1.8	140.2	
		6-06-63	2.7	139.3	

1-98.00

### LOWER RUSSIAN RIVER VALLEY

7N/10W-06N01 M	25.0	7-11-62	21.0	4.0	5000
		8-15-62	22.1	2.9	
		9-06-62	22.7	2.3	
		10-10-62	22.5	2.5	
		11-14-62	26.3	4.7	
		12-03-62	15.0	10.0	
		1-03-63	18.9	6.1	
		2-12-63	14.8	10.2	
		3-05-63	19.2	5.8	
		4-16-63	14.7	10.3	
		5-13-63	17.9	7.1	
		6-06-63	19.9	5.1	
7N/11W-14E01 M	25.0	7-11-62	34.1*	9.1	5000
		8-15-62	19.2	5.8	
		9-06-62	19.4	5.6	
		10-10-62	24.5	6.9	
		11-14-62	18.1	7.7	
		12-03-62	17.3	6.6	
		1-03-63	18.4	6.6	
		2-12-63	13.7	11.3	
		3-05-63	17.7	7.3	
		4-16-63	10.4	14.6	

TABLE C-2

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD. SUR. TO WATER SUR. IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAN FRANCISCO BAY REGION					
PETALUMA VALLEY					
2-01-00					
3N/05W-01001 M	2.0	4-12-63	1.4	0.6	5050
5N/07W-20802 M	41.0	8-14-62	92.3	51.3	5000
		9-04-62	80.7*	39.7	
		10-09-62	77.2	36.2	
		11-14-62	72.6	31.6	
		12-03-62	69.3	28.3	
		1-02-63	66.6	25.6	
		2-12-63	63.8	22.8	
		3-05-63	63.4	22.4	
		4-16-63	63.2	22.2	
		5-13-63	61.7	20.7	
		6-06-63	65.6	24.6	
5N/07W-21H01 M	65.0	7-10-62	□		5000
		8-14-62	□	18.6	
		9-04-62	46.4	15.9	
		10-09-62	48.1	16.7	
		11-14-62	48.3	16.4	
		12-03-62	48.6	17.2	
		1-02-63	47.8	22.7	
		2-12-63	42.3	22.7	
		3-05-63	41.3*	23.7	
		4-16-63	35.5	29.5	
		5-13-63	32.6	32.4	
		6-06-63	32.7	32.3	
5N/07W-26R01 M	53.6	7-10-62	27.9	25.7	5000
		8-14-62	28.2	25.4	
		9-04-62	28.9	24.7	
		10-09-62	28.1	25.5	
		11-14-62	29.1	24.5	
		12-03-62	29.2	24.4	
		1-02-63	28.1	25.5	
		2-12-63	27.2	26.4	
		3-05-63	26.8	28.8	
		4-16-63	21.7	31.9	
		5-13-63	20.3	33.3	
		6-06-63	19.9	33.7	
5N/07W-35K01 M	18.8	4-12-63	7.2	11.6	5050
SAN FRANCISCO BAY REGION					
NAPA-SONOMA VALLEY					
NAPA VALLEY					
2-02-00					
4N/04W-13E01 M	41.0	7-10-62	□		5000
		8-16-62	□		
		9-04-62	□		
		10-09-62	□		
		11-15-62	#		
5N/04W-11M01 M	13.0	7-10-62	8.7	4.3	5000
		8-16-62	9.3	3.7	
		9-04-62	9.5	3.5	
		10-09-62	8.9	4.1	
		11-14-62	7.3	5.7	
		12-03-62	7.2	5.6	
		1-02-63	6.6	6.4	
		2-12-63	4.0	9.0	
		3-05-63	6.0	7.0	
		4-16-63	3.8	9.2	
		5-13-63	4.1	8.9	
		6-06-63	7.7	5.3	
6N/04W-17A01 M	67.0	7-12-62	12.6	54.4	5000
		8-16-62	14.8	52.2	
		9-18-62	18.5	48.5	
		10-11-62	22.3	44.7	
		11-15-62	9.9	57.1	
		12-04-62	9.6	57.4	
		1-04-63	8.4	58.6	
		2-13-63	1.3	65.7	
		3-06-63	2.2	64.8	
		4-17-63	8	66.2	
		5-14-63	2.1	64.9	
		6-07-63	4.9	62.1	
7N/05W-09Q01 M	155.0	4-09-63	6.6	148.4	5101
7N/05W-09Q02 M	155.0	7-12-62	24.2*	130.8	5000
		8-16-62	14.6	140.4	
		9-18-62	26.6*	128.4	
		10-11-62	14.4	140.6	
		11-15-62	10.4	144.6	
		12-04-62	11.4	143.6	
		1-04-63	12.4	142.6	
		2-13-63	6.0	149.0	
		3-06-63	8.4	146.6	

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD. SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAN FRANCISCO BAY REGION					
NAPA VALLEY					
2-02*01					
7N/05W-09002 M CONT.	155.0	4-09-63 4-17-63 5-14-63 6-07-63	6.2 5.9 7.4 8.5	148.8 149.1 147.6 146.5	5101 5000
7N/05W-09003 M	155.0	4-09-63	2.9	152.1	5101
7N/05W-23002 M	127.0	4-10-63	•2	126.8	5101
8N/06W-10001 M	290.0	7-12-62 8-16-62 9-18-62 10-11-62 11-15-62 12-04-62 1-04-63 2-13-63 3-06-63 4-17-63 5-14-63 6-07-63	5.9 8.5 10.2 9.6 5.8 4.4 2.2 1.9 1.5 1.1 1.5 2.5	284.1 281.5 279.8 280.4 284.2 285.6 287.8 289.1 288.5 288.9 288.5 287.5	5000
SONOMA VALLEY					
2-02*02					
5N/05W-29N01 M CONT.	16.0	12-03-62 1-02-63 2-12-63 3-05-63 4-16-63 5-13-63 6-06-63	11.4 20.5* 6.3 7.0 4.0 6.6 7.9	4.6 - 4.5 9.7 9.0 12.0 9.4 8.1	5000
SUISUN-FAIRFIELD VALLEY					
2-03*00					
4N/02W-06A01 M	35.0	3-30-63	9.1	25.9	5109
4N/02W-09A01 M	7.0	3-19-63	3.1	3.9	5109
4N/03W-01D01 M	37.0	3-19-63	3.6	33.4	5109
5N/01E-36A01 M	24.0	3-19-63	9.7	14.3	5109
5N/01W-07E01 M	115.0	3-18-63	13.1	101.9	5109
5N/01W-28P01 M	15.0	3-19-63	5.9	9.1	5109
5N/02W-17D02 M	101.0	3-18-63	4.2	96.8	5109
5N/02W-27J02 M	24.0	7-10-62 8-14-62 9-04-62 10-09-62 11-14-62 12-03-62 1-02-63 2-12-63 3-05-63 3-19-63 4-16-63 5-13-63 6-06-63	29.1 28.9 29.0 29.4 27.1 28.0 24.6 17.2 19.5 19.5 15.5 16.4 18.2	5.1 4.9 5.0 5.4 3.1 4.0 0.6 6.8 4.5 4.5 8.5 7.6 5.8	5000
5N/02W-29R01 M	46.0	3-18-63	9.6	36.4	5109
5N/02W-30J01 M	65.0	7-10-62 8-14-62 9-04-62 10-09-62 11-14-62	26.9 24.7 24.2 26.1 23.6	38.1 40.3 40.8 38.9 41.2	5000
SONOMA VALLEY					
2-02*02					
5N/05W-17C01 M	85.0	7-10-62 8-14-62 9-04-62 10-09-62 11-14-62 12-03-62 1-02-63 2-12-63 3-05-63 4-12-63 4-16-63 5-13-63 6-06-63	13.4 19.1 18.6 19.9 17.4 17.7 14.5 12.2 12.2 12.4 12.4 19.1 15.7	71.6 65.9 65.4 65.1 61.6 61.3 70.5 72.8 72.8 72.6 72.6 65.9 69.3	5000
5N/05W-28N01 M	11.0	4-12-63	6.8	4.2	5050
5N/05W-29N01 M	16.0	7-10-62 8-14-62 9-04-62 10-09-62 11-14-62	10.5 12.5 12.0 13.6 11.5	5.5 3.5 4.0 2.4 4.5	5000

TABLE C-2

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAN FRANCISCO BAY REGION					
SUITSUN-FAIRFIELD VALLEY					
SANTA CLARA VALLEY			2-03-00		
5N/02W-30J01 M	65-0	12-03-62	24-0	41-0	5000
CONT.		1-02-63	23-9	41-1	
		2-12-63	21-3	43-7	
		3-05-63	20-4	44-6	5109
		3-18-63	20-4	44-6	5000
		4-16-63	18-9	46-1	
		5-13-63	18-9	46-1	
		6-06-63	20-6	44-4	
5N/03W-26F02 M	111-0	3-19-63	3-2	107-8	5109
YGNACIO VALLEY					
SOUTH ALAMEDA COUNTY UPR AQUIFER			2-06-00		
1N/01W-07K01 M	83-0	7-19-62	11-7	71-3	5050
		8-15-62	12-0	71-0	
		9-20-62	11-6	71-4	
		10-19-62	10-8	72-2	
		11-14-62	9-3	73-7	
		12-19-62	12-1	70-9	
		1-21-63	9-5	73-5	
		2-20-63	7-7	75-3	
		3-20-63	7-4	75-6	
		4-25-63	6-4	76-6	
		5-25-63	7-8	75-2	
		6-20-63	9-7	73-3	
1N/02W-11N01 M	63-0	3-20-63	12-2	50-8	5050
2N/02W-27R01 M	15-0	7-19-62	6-2	8-8	5050
		8-15-62	6-3	8-7	
		9-20-62	4-9	10-1	
		10-19-62	4-5	10-5	
		11-19-62	2-3	12-7	
		12-16-62	1-7	13-3	
		1-21-63	2-0	13-0	
		2-20-63	1-4	13-6	
		3-21-63	1-0	14-0	
		4-25-63	9	14-1	
		5-20-63	2-2	12-8	
		6-20-63	6-0	9-0	
2N/02W-36E01 M	48-0	3-21-63	13-7	34-3	5050
SAN FRANCISCO BAY REGION					
SANTA CLARA VALLEY					
SOUTH ALAMEDA COUNTY UPR AQUIFER			2-09-00		
3S/02W-08R05 M	64-0	9-00-62	37-5	26-5	5100
		12-00-62	34-2	29-8	
		4-00-63	32-5	31-5	
3S/03W-24Q02 M	7-0	9-00-62	7-8	-	5100
		4-00-63	2-5	4-5	
4S/01W-18G01 M	41-0	7-20-62	104-0	-	5401
		8-24-62	104-1	-	63-1
		9-14-62	104-6	-	63-6
		10-12-62	104-4	-	63-4
		11-23-62	101-1	-	60-1
		12-21-62	95-3	-	54-3
		1-18-63	92-3	-	51-3
		2-15-63	89-2	-	48-2
		3-15-63	81-1	-	40-1
		4-26-63	76-7	-	35-7
		5-24-63	75-8	-	34-8
		6-21-63	78-1	-	37-1
4S/01W-22P05 M	80-0	9-00-62	48-0	32-0	5100
		4-00-63	41-5	38-5	
4S/01W-29C04 M	55-0	7-20-62	104-3	-	49-3
		8-17-62	107-2	-	52-2
		9-21-62	109-3	-	54-3
		10-19-62	108-7	-	53-7
		3-22-63	88-9	-	33-9
4S/02W-13C02 M	36-4	7-20-62	82-9	-	46-5
		8-17-62	86-9	-	48-5
		9-00-62	#	-	
4S/02W-24Q02 M	33-4	9-00-62	87-9	-	54-5
		4-00-63	73-1	-	39-7
5S/01W-04F01 M	42-0	7-20-62	74-6	-	32-6
		8-24-62	75-4	-	33-4
		9-21-62	75-8	-	33-8
		10-19-62	76-0	-	34-0
		11-16-62	75-9	-	33-9
		12-14-62	75-9	-	33-9
		1-25-63	75-3	-	33-4

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAN FRANCISCO BAY REGION					
SOUTH ALAMEDA COUNTY UPR AQUIFER 2-09-01					
55/01W-04F01 M	42.0	2-22-63	75.1	- 33.1	5401
CONT.		3-22-63	74.5	- 32.5	
		4-19-63	73.9	- 31.9	
		5-17-63	73.4	- 31.4	
		6-14-63	72.6	- 30.6	
55/01W-09001 M	19.8	9-00-62	44.5	- 24.7	5100
		4-00-63	44.5	- 24.7	
SOUTH ALAMEDA COUNTY LWR AQUIFER 2-09-01					
25/03W-36R01 M	45.0	9-00-62	82.1	- 37.1	5100
		4-00-63	90.0	- 45.0	
35/02W-07D01 M	31.0	9-00-62	@		5100
35/02W-19A02 M	30.0	7-20-62	23.1	6.9	5050
		8-15-62	25.3	4.7	
		9-20-62	27.6	2.4	
		10-06-62	27.0	3.0	5100
		10-17-62	26.8	3.2	5050
		11-19-62	24.9	5.1	
		12-31-62	22.2	7.8	
		1-21-63	20.0	9.4	
		2-20-63	19.9	10.0	5100
		3-20-63	19.9	10.5	5050
		4-00-63	18.9	11.1	
		4-24-63	18.1	10.9	
		5-20-63	19.1	10.4	
		6-20-63	19.6		
35/03W-24J01 M	11.0	9-00-62	86.5	- 75.5	5100
		4-00-63	72.0	- 61.0	
SOUTH ALAMEDA COUNTY LWR AQUIFER 2-09-01					
45/02W-02001 M	26.0	9-00-62	167.0*	- 141.0	5100
		9-28-62	147.6	121.6	5401
		10-26-62	139.2	- 113.2	
		4-00-63	82.5	- 56.5	5100
45/02W-35R02 M	15.0	7-20-62	97.1	- 82.1	5401
		8-24-62	104.0	- 89.0	
		9-21-62	101.9	- 86.9	
		10-19-62	90.2	- 75.2	
		11-16-62	81.8	- 66.8	
		12-14-62	74.6	- 59.6	

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAN FRANCISCO BAY REGION					
SOUTH ALAMEDA COUNTY LWR AQUIFER 2-09-01					
45/02W-35R02 M	15.0	1-11-63	69.0	- 54.0	5401
CONT.		2-22-63	61.1	- 46.1	
		3-22-63	57.9	- 42.9	
		4-19-63	51.8	- 36.8	
		5-17-63	53.8	- 38.8	
		6-14-63	67.8	- 52.8	
45/02W-36K01 M	24.0	7-20-62	109.7	- 85.7	5401
		8-24-62	112.6	- 88.6	
		9-21-62	111.5	- 87.5	
		10-19-62	100.3	- 76.3	
		11-16-62	91.9	- 67.9	
		12-14-62	84.7	- 60.7	
		1-18-63	79.7	- 55.7	
		2-22-63	72.3	- 48.3	
		3-22-63	69.8	- 45.8	
		4-19-63	62.5	- 38.5	
		5-17-63	66.0	- 42.0	
		6-14-63	80.1	- 56.1	
55/01W-09M01 M	15.0	9-00-62	111.3	- 96.3	5100
		4-00-63	57.8	- 42.8	
NORTH SANTA CLARA COUNTY 2-09-02					
65/01E-07E01 M	15.8	7-24-62	138.8	- 123.0	2400
		8-21-62	138.9	- 123.1	
		9-21-62	138.8	- 123.0	
		10-22-62	121.1	- 106.3	
		11-21-62	112.1	- 96.3	
		12-21-62	103.1	- 87.3	
		1-22-63	97.9	- 82.1	
		2-20-63	92.1	- 76.3	
		3-20-63	88.7	- 72.9	
		4-22-63	82.2	- 66.4	
		5-21-63	85.4	- 69.6	
		6-25-63	120.8	- 105.0	
65/01E-21R01 M	138.0	7-23-62	248.4	- 110.4	2400
		8-20-62	253.0	- 115.0	
		9-20-62	249.3	- 111.3	
		10-19-62	242.8	- 104.8	
		11-20-62	232.1	- 94.1	
		12-20-62	218.4	- 80.4	



TABLE C-2

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAN FRANCISCO BAY REGION					
NORTH SANTA CLARA COUNTY					
2-09+02					
65/01E-21R01 M CONT.	136.0	2-19-63 3-13-63 4-22-63 5-21-63 6-24-63	217.3 213.1 213.1 213.1 □	- 79.3 - 75.1 - 75.1	2400
65/01E-23P02 M	240.5	7-23-62 8-17-62 9-18-62 10-18-62 11-19-62 12-19-62 1-18-63 2-18-63 3-19-63 4-18-63 5-20-63 6-24-63	167.3 167.6 168.6 168.8 170.8 170.6 171.1 171.6 170.7 166.2 155.0 156.1	73.2 72.9 71.9 71.7 69.7 69.9 69.4 68.9 69.8 74.3 85.5 84.4	2400
65/01E-30M01 M	43.0	7-28-62 8-22-62 9-21-62 10-23-62 11-26-62 12-24-62 1-23-63 2-21-63 3-21-63 4-23-63 5-22-63 6-25-63	171.0* □ 165.1* 143.1 131.9 123.9 120.7 115.8 105.2 102.7 104.8 □	- 128.0 - 132.1 - 88.1 - 88.9 - 90.8 - 77.7 - 72.8 - 82.2 - 59.7 - 61.8	2400
65/01W-10P02 M	9.0	7-18-62 8-13-62 9-11-62 10-17-62 11-14-62 12-21-62	□ 131.4 □ □ #	- 122.4	5000
65/01W-23E01 M	21.0	7-18-62 8-13-62 9-11-62 10-17-62 11-14-62 12-21-62	174.6* 145.7 149.6 119.0 114.3 106.3	- 153.6 - 124.7 - 128.6 - 98.0 - 93.3 - 85.3	5000
SAN FRANCISCO BAY REGION					
NORTH SANTA CLARA COUNTY					
2-09+02					
65/01W-23E01 M CONT.	21.0	1-23-63 2-21-63 3-22-63 4-00-63 5-20-63 6-17-63	107.7 99.9 98.1 □ 93.8 152.8*	- 86.7 - 78.9 - 77.1 - 72.8 - 131.8	5000
65/02W-16R01 M	48.0	7-27-62 8-27-62 9-26-62 10-29-62 11-28-62 12-27-62 1-28-63 2-26-63 3-27-63 4-26-63 5-27-63 6-26-63	153.3 152.2 139.1 137.1 133.2 133.9 130.2 127.5 124.5 130.9 141.8	- 105.3 - 102.2 - 91.1 - 89.1 - 85.2 - 85.9 - 82.2 - 79.5 - 76.5 - 82.9 - 93.8	2400
65/02W-25C01 M	73.0	7-28-62 8-24-62 9-28-62 10-24-62 11-27-62 12-26-62 1-26-63 2-26-63 3-25-63 4-25-63 5-24-63 6-26-63	158.7 154.9 151.3 149.3 145.8 137.2 130.4 135.3 138.3 137.9 143.7 150.3	- 95.7 - 91.9 - 84.3 - 76.3 - 72.8 - 64.2 - 57.4 - 62.3 - 65.3 - 64.9 - 70.7 - 77.3	2400
65/02W-35C01 M	140.1	7-27-62 8-24-62 9-25-62 10-25-62 11-28-62 12-27-62 1-28-63 2-26-63 3-25-63 4-25-63 5-27-63 6-26-63	271.4 274.7 271.5 260.1 259.9 256.7 233.3 234.7 236.4 225.6 225.1 □	- 131.3 - 134.6 - 131.4 - 120.0 - 119.8 - 116.6 - 93.2 - 94.6 - 96.3 - 85.5 - 95.0	2400

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAN FRANCISCO BAY REGION					
NORTH SANTA CLARA COUNTY					
2-09-02					
7S/01E-01K01 M	179.0	7-20-62	207.1	- 28.1	2400
		8-16-62	212.4	- 33.4	
		9-18-62	206.9	- 27.9	
		10-18-62	204.2	- 25.2	
		11-19-62	205.1	- 26.1	
		12-18-62	203.7	- 24.7	
		1-15-63	202.8	- 23.8	
		2-15-63	201.8	- 22.8	
		3-18-63	200.7	- 21.7	
		4-18-63	199.3	- 20.3	
		5-17-63	201.4	- 22.4	
		6-13-63	199.9	- 23.9	
7S/01E-08L01 M	88.0	7-20-62	173.8	- 85.8	2400
		8-23-62	171.7	- 83.7	
		9-20-62	171.7	- 83.7	
		10-16-62	171.4	- 83.4	
		11-20-62	165.8	- 77.8	
		12-27-62	156.6	- 68.6	
		1-23-63	151.1	- 63.1	
		2-26-63	141.2	- 53.2	
		3-26-63	154.6	- 66.6	
		4-26-63	144.9	- 56.9	
		5-24-63	140.4	- 52.4	
		6-25-63	153.3	- 65.3	
7S/01E-09D02 M	95.9	7-01-62	199.0	- 103.1	2400
		7-26-62	205.0	- 109.1	
		9-01-62	208.0	- 116.1	
		10-01-62	210.0	- 114.1	
		11-01-62	185.0*	- 89.1	
		12-01-62	182.0	- 86.0	
		1-01-63	183.0	- 89.1	
		2-01-63	185.0	- 89.1	
		3-01-63	172.0	- 76.1	
		4-01-63	165.0	- 69.1	
		5-00-63		-	
		6-27-63	177.0	- 81.1	
7S/01E-16C05 M	105.0	7-18-62	249.0	- 144.0	5000
		8-13-62	253.3	- 148.3	
		9-11-62		-	
		10-17-62	242.5	- 137.5	
		11-14-62	232.0	- 127.0	
		12-21-62		-	
NORTH SANTA CLARA COUNTY					
2-09-02					
7S/01E-16C05 M	105.0	1-23-63	217.0	- 112.0	5000
		2-21-63	198.2	- 93.2	
		3-22-63	162.4	- 77.4	
		4-00-63		-	
		5-20-63	179.8	- 74.8	
		6-17-63	212.7*	- 107.7	
7S/01E-31A02 M	151.6	7-31-62	199.2	- 47.6	2400
		8-03-62	199.2	- 47.6	
		9-05-62	211.5*	- 59.5	
		10-04-62	201.7	- 50.1	
		11-06-62	199.5	- 47.9	
		12-04-62	198.7	- 47.1	
		1-03-63	168.6	- 17.2	
		2-04-63	161.7	- 10.1	
		3-05-63	142.9	- 8.7	
		4-02-63	144.8	- 6.8	
		5-06-63	144.3	- 7.3	
		6-04-63	157.1	- 5.5	
7S/01E-31R01 M	160.0	7-04-62	159.4	- 0.6	2400
		8-06-62	154.8	- 5.2	
		9-06-62	151.2	- 8.8	
		10-01-62	143.8	- 16.2	
		11-06-62	148.3	- 11.7	
		12-05-62	@	-	
7S/02E-07P01 M	130.0	7-20-62	157.4*	- 27.4	2400
		8-16-62	149.6	- 19.6	
		9-18-62	145.6	- 15.6	
		10-18-62	138.9	- 8.9	
		11-19-62	143.8	- 13.8	
		12-18-62	140.7	- 10.7	
		1-15-63	136.3	- 6.3	
		2-15-63	136.6	- 6.6	
		3-18-63	135.7	- 5.7	
		4-18-63	135.1	- 5.1	
		5-20-63	136.4	- 6.4	
		6-13-63	138.3*	- 8.3	
7S/02E-17H01 M	349.0	7-19-62	102.7	- 246.3	2400
		8-29-62	99.4	- 249.6	
		9-18-62	104.5	- 244.5	
		10-17-62	100.7	- 248.3	
		11-16-62	99.1	- 249.9	

TABLE C-2

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD. SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAN FRANCISCO BAY REGION					
NORTH SANTA CLARA COUNTY					
2-09-02					
7S/02E-17H01 M CONT.	349-0	12-18-62 1-15-63 2-15-63 3-18-63 4-17-63 5-17-63 6-13-63	95-3 93-9 98-6 96-3 95-7 99-1 100-5	253-7 255-1 250-4 252-7 253-3 249-9 248-5	2400
7S/02E-33C01 M	462-0	7-19-62 8-15-62 9-17-62 10-17-62 11-16-62 12-14-62 1-14-63 2-14-63 3-15-63 4-17-63 5-17-63 6-13-63	23-4 22-3 22-7 22-4 20-9 22-3 21-7 20-3 20-7 18-8 18-3 20-7	438-6 439-7 439-3 439-6 441-1 439-7 440-3 441-7 441-3 443-2 443-7 441-3	2400
7S/01W-35C01 M	202-0	7-02-62 8-01-62 9-01-62 10-02-62 11-01-62 12-03-62 1-02-63 2-01-63 3-01-63 4-01-63 5-01-63 6-01-63	245-0 232-0 227-0 236-0 242-0 247-0 247-0 245-0 232-0 217-0 204-0 195-0	- 43-0 - 30-0 - 25-0 - 34-0 - 40-0 - 45-0 - 45-0 - 43-0 - 30-0 - 15-0 - 2-0 7-0	2400
7S/02W-03001 M CONT.	216-7	7-07-62 8-28-62 9-01-62 10-06-62 11-05-62 12-03-62 1-05-63 2-05-63 3-07-63 4-02-63 5-07-63	350-0 343-0* 347-0 360-0* 352-0 350-0 342-0 338-0 339-0 338-0 333-0	- 133-3 - 126-3 - 130-3 - 143-3 - 135-3 - 133-3 - 125-3 - 121-3 - 122-3 - 121-3 - 116-3	2400
7S/02W-04B01 M	218-0	7-30-62 8-28-62 9-26-62 10-26-62 11-28-62 12-18-62 1-28-63 2-27-63 3-27-63 4-27-63 5-27-63 6-27-63	248-6 254-8 248-7 232-3 213-4 200-9 195-7 194-9 195-2 193-7 193-1 193-9	- 30-6 - 36-8 - 30-7 - 14-3 4-6 17-1 22-3 23-1 22-8 24-3 24-9 24-1	2400
7S/02W-22A01 M CONT.	340-0	7-30-62 8-28-62 9-26-62 10-26-62 11-28-62 12-28-62 1-29-63 2-27-63 3-28-63 4-27-63 5-28-63 6-27-63	- 30-0 - 25-0 - 34-0 - 40-0 - 45-0 - 43-0 - 30-0 - 15-0 - 2-0 7-0	313-9 316-8 314-4 324-2 325-9 326-7 325-1	2400
8S/01E-07H02 M	207-0	7-09-62 8-06-62 9-06-62 10-10-62 11-07-62 12-03-62 1-04-63 2-03-63 3-06-63 4-03-63 5-08-63 6-05-63	98-1 92-0 89-1 93-7 87-8 85-6 84-6 81-9 73-4 67-4 64-9 60-5	188-9 115-0 117-9 113-3 119-2 121-4 122-4 125-1 133-6 139-6 142-1	2400
8S/01E-13H01 M	184-6	7-31-62 8-08-62 9-11-62 10-26-62	47-8 45-1 41-8 39-1	136-8 139-5 142-8 145-5	2400

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD. SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAN FRANCISCO BAY REGION					
NORTH SANTA CLARA COUNTY					
2-09-02					
8S/01E-13H01 M CONT.	184.6	11-08-62	39.1	145.5	2400
		12-06-62	28.8	144.8	
		1-07-63	30.7	143.9	
		2-06-63	35.4	145.2	
		3-07-63	32.0	147.6	
		4-08-63	28.7	151.6	
		5-09-63	28.7	153.9	
		6-06-63	31.1	153.5	
8S/02E-20F03 M	209.0	7-11-62	44.7	164.3	2400
		8-08-62	□		
		9-11-62	48.2	160.8	
		10-26-62	50.0	159.0	
		11-08-62	50.0	159.0	
		12-07-62	50.7	158.3	
		1-08-63	51.9	157.1	
		2-07-63	50.0	159.0	
		3-11-63	42.7	166.3	
		4-08-63	38.8	170.2	
		5-10-63	35.3	173.7	
		6-06-63	23.7*	185.3	
8S/02E-22D01 M	239.7	7-11-62	12.6	227.1	2400
		8-09-62	19.3	220.4	
		9-11-62	24.4	215.3	
		10-10-62	26.3	213.4	
		11-08-62	23.9	215.8	
		12-07-62	25.1	214.6	
		1-08-63	26.0	213.7	
		2-07-63	12.8	226.9	
		3-11-63	14.2	225.5	
		4-08-63	14.7	225.0	
		5-10-63	10.2	229.5	
		6-07-63	11.0	228.7	
8S/01W-15B01 M	331.2	7-06-62	33.3	297.9	2400
		8-03-62	34.2	297.0	
		9-05-62	35.1	296.1	
		10-29-62	33.9	297.3	
		11-06-62	33.9	297.3	
		12-04-62	32.2	299.0	
		1-03-63	32.0	298.2	
		2-04-63	39.1	292.1	
		3-05-63	30.3	300.9	
		4-02-63	30.7	300.5	
SAN FRANCISCO BAY REGION					
NORTH SANTA CLARA COUNTY					
2-09-02					
8S/01W-15B01 M CONT.	331.2	5-07-63	31.5	299.7	2400
		6-04-63	33.4	297.8	
9S/02E-01J01 M	314.6	7-17-62	30.2	284.4	2400
		8-13-62	38.1	276.5	
		9-13-62	44.3	270.3	
		10-10-62	57.1*	257.5	
		11-13-62	41.7	272.9	
		12-12-62	43.7	270.9	
		1-10-63	43.1	271.5	
		2-08-63	34.7	279.9	
		3-12-63	25.3	289.3	
		4-11-63	22.9	291.7	
		5-10-63	26.7	287.9	
		6-11-63	34.6	280.0	
9S/02E-01M01 M	287.6	7-12-62	25.1	262.5	2400
		8-09-62	25.1	262.5	
		9-12-62	26.9	260.7	
		10-08-62	29.9	257.7	
		11-09-62	30.3	257.3	
		12-10-62	31.1	256.5	
		1-08-63	30.2	257.4	
		2-07-63	27.4	260.2	
		3-11-63	23.0	264.6	
		4-08-63	21.8	265.8	
		5-10-63	17.1	270.5	
		6-29-63	18.0	269.6	
LIVERMORE VALLEY					
2-10-00					
2S/02E-25N01 M	555.3	9-01-62	12.0	543.3	5100
		3-00-63	11.2	544.1	
2S/01W-26C01 M	416.9	9-01-62	112.3	304.6	5100
		3-00-63	92.4	324.5	
3S/01E-02E01 M	361.0	9-00-62	#		5100
3S/01E-11H01 M	372.9	9-01-62	150.5	222.4	5100
		3-00-63	117.5	255.4	
3S/02E-02R01 M	562.2	9-01-62	139.4	422.8	5100
		3-00-63	□		
3S/02E-10H01 M	551.0	9-01-62	□		5100

TABLE C-2

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SAN FRANCISCO BAY REGION					
LIVERMORE VALLEY					
2-10+00					
3S/02E-10H01 M CONT.	551.0	3-00-63	94.3	456.7	5100
HALF MOON BAY TERRACE					
2-22+00					
5S/05W-20L01 M	73.0	7-18-62	24.0	49.0	5050
		8-17-62	24.2	48.8	
		9-18-62	21.6	51.4	
		10-18-62	19.5	53.5	
		11-21-62	17.5	55.5	
		12-21-62	15.9	57.1	
		1-23-63	15.2	57.8	
		2-20-63	12.3	60.7	
		3-18-63	13.2	59.8	
		4-24-63	10.9	62.1	
		5-23-63	11.5	61.5	
		6-19-63	12.5	60.5	
5S/05W-29F03 M	50.0	3-19-63	#		5050
5S/05W-29N01 M	46.0	3-19-63	29.8	16.2	5050
6S/05W-08B01 M	108.0	3-19-63	59.2	48.8	5050
2-24+00					
SAN GREGORIO VALLEY					
7S/05W-13E01 M	80.0	7-18-62	12.6	67.4	5050
		8-17-62	13.2	66.8	
		9-18-62	13.3	66.7	
		10-18-62	13.5	66.5	
		11-21-62	10.7	69.3	
		12-21-62	10.1	69.9	
		1-23-63	10.7	69.3	
		2-20-63	8.9	71.1	
		3-19-63	9.7	70.3	
		4-24-63	10.3	69.7	
		5-23-63	11.1	68.9	
		6-19-63	11.4	68.6	
7S/05W-15C01 M	80.0	3-19-63	11.5	68.5	5050
7S/05W-15E01 M	75.2	3-19-63	3.3	71.9	5050
7S/05W-15E02 M	30.0	7-18-62	12.6	17.4	5050
		8-17-62	13.6	16.4	
		9-18-62	13.6	16.4	
SAN FRANCISCO BAY REGION					
SAN GREGORIO VALLEY					
2-24+00					
7S/05W-15E02 M CONT.	30.0	10-18-62	10.7	19.3	5050
		11-21-62	11.9	18.1	
		12-21-62	11.5	18.5	
		1-23-63	12.0	18.0	
		2-20-63	10.6	19.4	
		3-19-63	12.5	17.5	
		4-24-63	11.0	19.0	
		5-23-63	12.7	17.3	
		6-19-63	13.6	16.4	
7S/05W-15H02 M	40.0	3-19-63	15.4	24.6	5050
2-26+00					
PESCADERO VALLEY					
8S/05W-09H01 M	20.0	7-18-62	4.9	15.1	5050
		8-17-62	5.4	14.6	
		9-18-62	5.6	14.4	
		10-18-62	4.1	15.9	
		11-21-62	4.9	15.1	
		12-21-62	3.5	16.5	
		1-23-63	5.0	15.0	
		2-23-63	4.0	16.0	
		3-19-63	4.3	15.7	
		4-24-63	3.9	16.1	
		5-23-63	4.6	15.4	
		6-19-63	4.7	15.3	
8S/05W-11M01 M	45.0	3-19-63	13.1	31.9	5050

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
CENTRAL COASTAL REGION					
3-01-00					
SOQUEL VALLEY					
115/01W-09L01 M	124.2	7-18-62 58.4 8-17-62 59.0 9-18-62 58.8 10-18-62 58.5 11-20-62 58.5 12-20-62 60.9 1-22-63 59.4 2-18-63 59.0 3-19-63 60.2 4-23-63 63.7 5-22-63 58.4 6-19-63 57.4	58.4 59.0 58.8 58.5 58.5 60.9 59.4 59.0 60.2 63.7 58.4 57.4	65.8 65.2 65.4 64.5 65.7 63.3 64.8 65.2 64.0 63.7 65.8 66.8	5050
115/01W-15H01 M	91.7	6-10-63 60.3*	60.3*	31.4	5050
PAJARO VALLEY					
3-02-00					
125/01E-24G01 M	9.4	7-18-62 19.8 8-16-62 14.6 9-18-62 8.9 10-18-62 8.3 11-20-62 6.1 12-20-62 5.9 1-22-63 4.5 2-19-63 4.5 3-19-63 5.0 4-23-63 3.5 5-21-63 13.0 6-18-63 13.8	19.8 14.6 8.9 8.3 6.1 5.9 4.5 4.5 5.0 3.5 13.0 13.8	10.4 5.2 0.5 1.1 3.3 3.5 4.9 4.4 5.9 3.6 4.4	5050
125/02E-16J01 M	20.5	7-18-62 30.5 8-16-62 23.0 9-18-62 17.4 10-18-62 15.7 11-20-62 14.0 12-20-62 14.3 1-22-63 13.1 2-19-63 7.4 3-19-63 12.2 4-23-63 10.3 5-21-63 22.2 6-18-63 23.3	30.5 23.0 17.4 15.7 14.0 14.3 13.1 7.4 12.2 10.3 22.2 23.3	10.0 2.5 3.1 4.8 6.5 6.2 7.4 8.3 10.2 1.7 2.8	5050
125/02E-31K01 M	30.0	7-18-62 31.0 8-16-62 30.2 9-18-62 32.1 10-18-62 28.9 11-20-62 29.5 12-20-62 52.3* 1-22-63 26.6 2-19-63 26.0 3-19-63 24.9 4-08-63 24.8 5-21-63 46.3* 6-18-63 27.5	31.0 30.2 32.1 28.9 29.5 52.3* 26.6 26.0 24.9 24.8 46.3* 27.5	1.0 0.2 0.2 1.1 0.5 22.3 3.4 4.0 5.1 5.2 16.3 2.5	5050

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
CENTRAL COASTAL REGION					
3-02-00					
PAJARO VALLEY					
125/02E-31K01 M	30.0	9-18-62 31.0 10-18-62 30.2 11-20-62 32.1 12-20-62 28.9 1-20-62 29.5 1-22-63 52.3* 2-19-63 26.6 3-19-63 26.0 4-08-63 24.9 5-21-63 46.3* 6-18-63 27.5	31.0 30.2 32.1 28.9 29.5 52.3* 26.6 26.0 24.9 24.8 46.3* 27.5	1.0 0.2 0.2 1.1 0.5 22.3 3.4 4.0 5.1 5.2 16.3 2.5	5050
135/02E-05B01 M	136.0	7-18-62 138.5 8-16-62 139.7 9-18-62 140.7 10-18-62 140.5 11-20-62 139.3 12-20-62 138.4 1-22-63 139.3 2-19-63 136.2 3-19-63 137.9 4-23-63 134.4 5-21-63 143.8* 6-18-63 135.6	138.5 139.7 140.7 140.5 139.3 138.4 139.3 136.2 137.9 134.4 143.8* 135.6	2.5 3.7 4.7 4.5 3.3 2.4 1.3 0.2 1.9 1.6 7.8 0.4	5050
GILROY-HOLLISTER VALLEY					
3-03-00					
SOUTH SANTA CLARA COUNTY					
95/03E-27C02 M	347.0	7-16-62 120.7* 8-10-62 118.9 9-18-62 118.0 10-28-62 118.4 11-13-62 115.6 12-10-62 111.7 1-09-63 111.7 2-11-63 108.6 3-12-63 101.4 4-10-63 91.8 5-13-63 82.9 6-10-63 81.1	120.7* 118.9 118.0 118.4 115.6 111.7 111.7 108.6 101.4 91.8 82.9 81.1	226.3 239.1 231.0 228.6 231.6 230.0 238.3 238.4 255.6 255.2 26*.1	2400
95/03E-29B01 M	397.6	4-03-63 8.1	8.1	389.5	5050
105/03E-34L01 M	249.3	7-17-62 7.5	7.5	241.8	5050

TABLE C-2

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
CENTRAL COASTAL REGION					
SOUTH SANTA CLARA COUNTY					
3-03-01			3-03-01		
105/03E-34L01 M	249.3	8-16-62	8.9	240.4	5050
CONT.		9-19-62	14.2	235.1	
		10-17-62	11.9	237.4	
		11-19-62	8.4	240.9	
		12-19-62	□		
		1-23-63	10.3	239.0	
		2-18-63	6.7	242.6	
		3-20-63	5.8	243.5	
		4-03-63	7.2	242.1	
		4-23-63	6.4	242.9	
		5-20-63	8.0	241.3	
		6-18-63	8.0	241.3	
105/04E-18G02 M	259.5	7-17-62	101.4	158.1	5050
		8-16-62	98.6	160.9	
		9-09-62	□		
		10-17-62	104.8	154.7	
		11-19-62	88.3	171.2	
		12-19-62	82.9	176.6	
		1-21-63	86.7	172.8	
		2-18-63	76.5	183.0	
		3-20-63	71.4	188.1	
		4-03-63	64.5	195.0	
		4-23-63	54.2	205.3	
		5-20-63	50.3	209.2	
		6-18-63	63.0	196.5	
105/04E-35E01 M	248.0	4-03-63	81.7	166.3	5050
115/03E-01B01 M	227.0	4-00-63	54.7	172.3	5400
SAN BENITO COUNTY					
3-03-02			3-03-02		
115/05E-13D01 M	255.7	6-18-63	□		5050
		3-00-63	27.2	125.7	5101
		7-17-62	95.2*	121.1	5050
		8-16-62	88.3	128.0	
		9-19-62	76.9	139.4	
		10-17-62	91.5*	124.8	
		11-19-62	88.9	127.4	
		12-20-62	78.9	137.4	
		1-21-63	80.6	135.7	
		2-18-63	137.4	137.9	
		3-00-63	77.0	139.3	5101
		4-23-63	78.2	138.1	5050
SALINAS VALLEY					
3-04-00			3-04-00		
PRESSURE AREA 180 FOOT AQUIFER					
145/02E-03C01 M	10.6	12-07-62	17.6	- 7.0	2100
		3-22-63	10.1	0.5	
		12-05-62	24.5	- 1.5	2100
		3-19-63	18.0	5.0	
		7-18-62	□		2100
		8-15-62	□		
		9-15-62	□		
		10-15-62	□		
		11-15-62	□		
		12-15-62	□		
		1-15-63	□		
		2-15-63	□		



## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
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## CENTRAL COASTAL REGION

## PRESSURE AREA 180 FOOT AQUIFER

3-04.01

155/C2E-01001 M	42.0	10-19-62	49.7	-	2100
CONT.		11-20-62	43.7	-	
		12-03-62	39.1	1.7	
		1-18-63	34.9	7.1	
		2-19-63	28.7	13.3	
		3-18-63	30.7	11.3	
		4-16-63	□		
		5-14-63	□		
		6-14-63	□		

155/O3E-16M01 M	58.0	12-24-62	41.0	17.0	2100
		3-21-63	37.5	20.5	
155/O4E-33A01 M	125.0	12-07-62	89.7	35.3	2100
		3-19-63	86.8	38.2	
165/O4E-11D01 M	110.0	12-06-62	56.2	53.8	2100
		3-21-63	51.0	59.0	

## PRESSURE AREA 400 FOOT AQUIFER

3-04.01

135/O2E-31001 M	11.0	12-06-62	20.2	-	2100
		3-21-63	7.2	9.2	
				3.8	
145/O3E-18J01 M	69.0	7-19-62	96.3	-	2100
		8-15-62	□		
		9-18-62	91.5	-	
		10-22-62	80.5	-	
		11-20-62	76.8	-	
		12-10-62	71.9	-	
		1-18-63	67.3	1.7	
		2-19-63	63.6	5.4	
		3-18-63	65.1	3.9	
		4-16-63	60.6	8.4	
		5-14-63	68.0	1.0	
		6-14-63	93.0	-	

## EAST SIDE AREA

3-04.02

165/O5E-17R01 M	181.0	12-14-62	113.3	67.7	2100
		3-22-63	109.0	72.0	

## CENTRAL COASTAL REGION

## FOREBAY AREA

3-04.03

175/O5E-11C01 M	172.0	7-17-62	62.2	109.8	2100
		8-14-62	62.3	109.7	
		9-17-62	61.4	110.6	
		10-18-62	59.7	112.3	
		11-19-62	58.2	113.8	
		12-14-62	56.7	115.3	
		1-17-63	56.3	115.7	
		2-18-63	53.3	118.7	
		3-25-63	□		
		4-17-63	□		
		5-14-63	□		
		6-13-63	#		

## ARROYO SECO CONE

3-04.04

185/O6E-15M01 M	277.0	12-12-62	97.3	179.7	2100
		3-21-63	84.9	182.1	
195/O6E-11C01 M	373.0	7-17-62	□		2100
		8-13-62	□		
		9-17-62	195.0	178.0	
		10-18-62	193.2	179.8	
		11-19-62	186.0	187.0	
		12-17-62	173.2	199.8	
		1-17-63	168.0	205.0	
		2-18-63	161.5	211.5	
		3-20-63	153.2	219.8	
		4-17-63	147.0	226.0	
		5-15-63	146.0	227.0	
		6-13-63	□		

## UPPER VALLEY AREA

3-04.05

195/O7E-10P01 M	315.0	7-16-62	□		2100
		8-16-62	□		
		9-17-62	86.8	228.2	
		10-18-62	84.5	230.5	
		11-15-62	84.1	230.9	
		12-18-62	82.2	232.8	
		1-17-63	84.3	230.7	
		2-18-63	83.7	231.3	
		3-20-63	81.9	233.1	
		4-17-63	81.5	233.5	
		5-15-63	□		
		6-13-63	□		

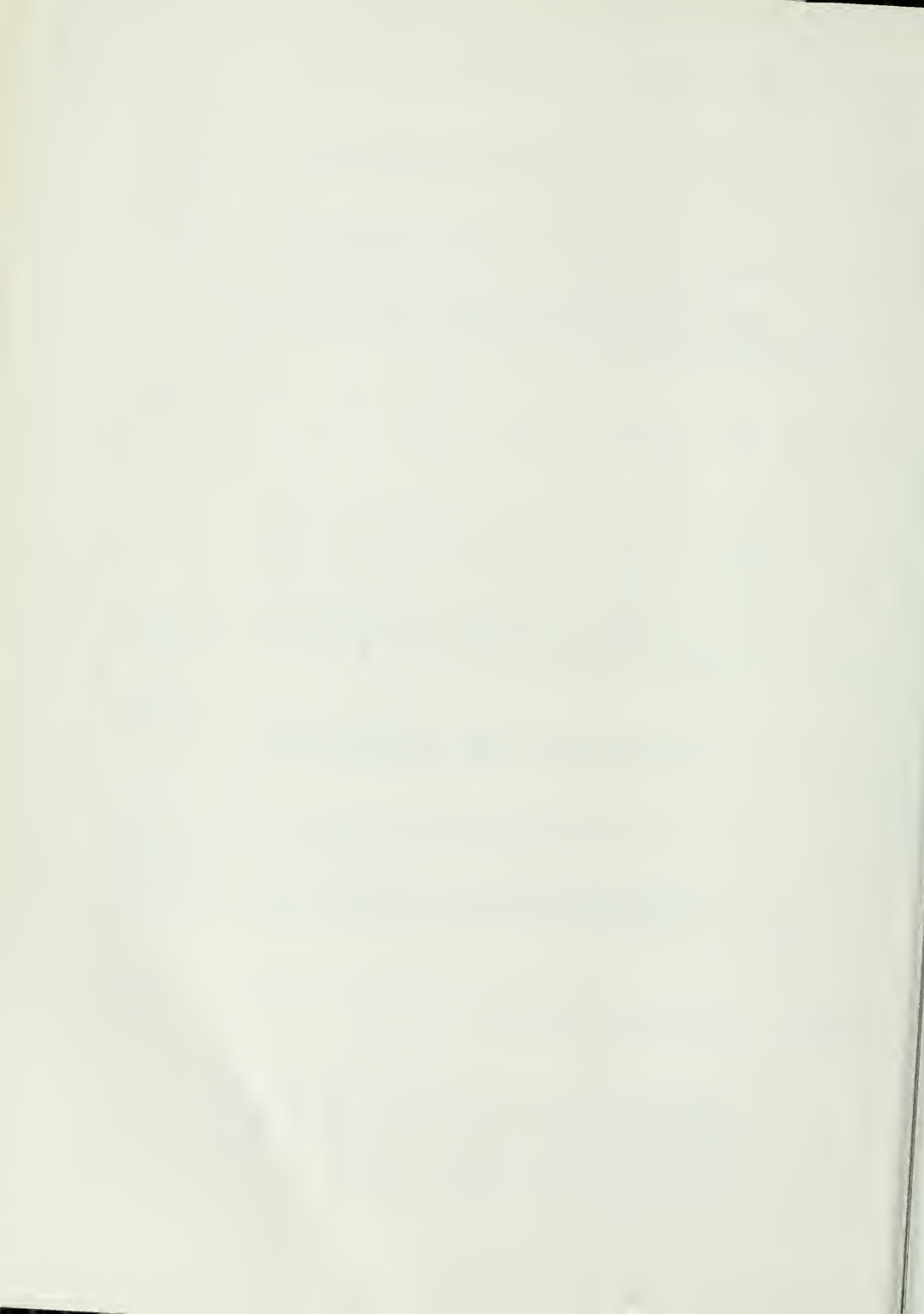
TABLE C-2

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
CENTRAL COASTAL REGION						CENTRAL COASTAL REGION					
UPPER VALLEY AREA						PASO ROBLES					
3-04.05						3-04.06					
20S/08E-05R01 M	337.0	12-18-62 3-19-63	64.2 □	272.8	2100	26S/12E-26E01 M	839.0	4-11-62 4-12-63	190.2 195.7	648.8 643.3	5100
21S/09E-06K01 M	344.0	12-03-62 3-19-63	12.3 □	331.7	2100	26S/12E-35M01 M	818.0	4-10-62 4-12-63	135.9 144.4	682.1 673.6	5100
21S/10E-32N01 M	400.0	12-03-62 3-18-63	21.2 19.2	378.8 380.8	2100	26S/13E-10D01 M	799.0	4-09-62 4-15-63	8.1 8.6	790.9 790.4	5100
22S/10E-16K01 M	472.0	12-04-62 3-18-63	74.1 70.2	397.9 401.8	2100	26S/13E-34B01 M	1005.0	4-12-63	153.7	851.3	5100
PASO ROBLES						26S/14E-16L01 M	1018.0	4-09-62 4-15-63	55.6 63.9	962.4 954.1	5100
3-04.06						26S/14E-35D01 M	1134.5	4-11-62 4-15-63	114.9 79.2	1019.6 1055.3	5100
24S/10E-11C01 M	618.0	4-12-63	50.5	567.5	5100	26S/15E-02B01 M	1114.0	4-09-62 4-15-63	29.9 28.0	1084.1 1086.0	5100
24S/11E-25N01 M	603.0	4-12-63	37.1	565.9	5100	26S/15E-28O02 M	1111.4	4-11-62 4-16-63	49.1 60.7	1062.3 1050.7	5100
24S/11E-33R01 M	564.0	4-12-63	19.1	544.9	5100	26S/15E-29N01 M	1134.4	4-11-62 4-15-63	77.4 76.4	1057.0 1058.0	5100
24S/11E-35J01 M	616.8	4-12-63	69.0	547.8	5100	27S/12E-21N01 M	747.5	4-10-62 4-12-63	7.2 5.9	740.3 741.6	5100
24S/12E-17N01 M	769.5	4-12-63	14.9	754.6	5100	27S/13E-24N01 M	1030.0	4-10-62 4-12-63	17.5 8.0	1012.5 1022.0	5100
24S/15E-33C01 M	1225.0	4-15-63	29.6	1195.4	5100	27S/13E-32B01 M	1103.5	4-10-62 4-12-63	48.5 51.3	1055.0 1052.2	5100
25S/11E-35G01 M	879.8	4-12-63	40.5	839.3	5100	27S/15E-10R02 M	1130.0	4-11-62 4-16-63	45.7 57.7	1084.3 1072.3	5100
25S/12E-17J01 M	639.0	4-12-63	44.4	594.6	5100	27S/15E-13A01 M	1153.5	4-10-62 4-16-63	11.2 23.3	1142.3 1130.2	5100
25S/12E-17R01 M	639.0	4-12-63	46.6	592.4	5100	27S/16E-21E02 M	1253.0	4-10-62 4-16-63	55.8 57.9	1197.2 1195.1	5100
25S/12E-26K01 M	747.5	4-15-63	109.0	638.5	5100	28S/12E-10G01 M	825.0	4-10-62	1.2	825.2	5100
25S/13E-11E01 M	1184.0	4-09-62 4-15-63	39.1 39.1	1144.9 1144.9	5100						
25S/16E-17L01 M	1164.5	4-09-62 4-15-63	29.5 27.8	1135.0 1136.7	5100						
25S/16E-30M01 M	1218.0	4-09-62 4-15-63	72.8 75.3	1145.2 1142.7	5100						
26S/12E-04N01 M	674.5	4-09-62 4-12-63	43.5 44.5	631.0 630.0	5100						

## GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GRD SUR TO WATER SUR IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
CENTRAL COASTAL REGION					
PASO ROBLES					
			3-04-06		
285/12E-10G01 M	825.0	4-12-63	7.7	816.3	5100
285/12E-10R02 M	805.0	4-09-62 4-10-63	9.2 8.9	795.8 796.1	5100
285/12E-13N01 M	850.3	4-11-62 4-16-63	6.1 7.9	844.2 842.4	5100
285/12E-14G01 M	824.6	4-11-62 4-16-63	7.4 1.3	817.2 825.9	5100
285/13E-04K01 M	1199.5	4-10-62 4-12-63	62.2 65.3	1137.3 1134.2	5100
285/13E-04K02 M	1195.0	4-10-62 4-12-63	69.0 77.4	1126.0 1117.6	5100
285/14E-07E01 M	1150.0	4-10-62 4-12-63	10.0 11.0	1140.0 1139.0	5100
285/16E-23N01 M	1439.0	4-10-62 4-16-63	39.6 41.9	1399.4 1397.1	5100
295/13E-05F03 M	915.6	4-11-62 4-16-63	12.1 14.0	903.5 901.6	5100
295/13E-05K02 M	928.5	4-11-62 4-16-63	6.7 10.0	921.8 918.5	5100
295/13E-06A01 M	920.0	4-11-62 4-16-63	38.3 39.1	881.7 880.9	5100
295/13E-19H01 M	1002.5	4-10-62 4-16-63	8.1 7.9	994.4 994.6	5100
CARMEL VALL-					
			3-07-00		
16S/01E-25B01 M	140.0	7-20-62 3-14-62 9-18-62	15.3 15.4 □	124.7 124.6	5050
		10-16-62 11-16-62 12-07-62 1-18-63 2-19-63	15.1 16.2 16.4 16.0 13.0	124.9 123.8 123.6 124.0 127.0	5100
CENTRAL COASTAL REGION					
CARMEL VALLEY					
			3-07-00		
16S/01E-25B01 M CONT.	140.0	3-00-63 4-16-63 5-21-63 6-17-63	□ 13.0 13.8 14.7	127.0 126.2 125.3	5100
WEST SANTA CRUZ TERRACE					
11S/02W-22K01 M	30.0	11-29-62	69.7	- 39.7	5050



APPENDIX D

SURFACE WATER QUALITY



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## SURFACE WATER QUALITY

This appendix contains data pertaining to the quality of surface waters in the Central Coastal Area. The data presented are the observed physical, chemical, bacteriological, and radiological characteristics of surface waters sampled during the 1963 water year, which covers the period from October 1, 1962 through September 30, 1963.

### Laboratory Methods and Procedures

Methods of mineral and bacterial analysis, in general, are those described in the American Public Health Association publication, "Standard Methods for the Examination of Water and Sewage", 11th Edition, 1960. In some cases, the methods described in U. S. Geological Survey, "Methods for Collection and Analysis of Water Samples", Water Supply Paper 1454, 1960, have been employed.

Types of analyses normally made of surface water samples collected by the Department are mineral, bacterial, radiological, and trace element.

### Sampling Station Data and Index

Table D-1, "Sampling Station Data and Index", is an alphabetic listing of stations from which surface water samples were collected. The analyses of these samples are reported in subsequent tables. The station number is an arbitrary number that has been assigned to each station. The location pertains to either the township, range, and section of the Public Land Survey or to latitude and longitude. The stations are classified into monitoring, investigational, and operational types.

### Analyses of Surface Water

Table D-2, "Analyses of Surface Water", includes physical characteristics of the water and the results of mineral and bacterial analyses. The data are presented by region and by stream from north to south within a region. At the time the samples were collected for laboratory examination, field determinations were made for dissolved oxygen (DO) by the modified Winkler method, water temperature, and pH. Visual inspections were made of the streams and the physical conditions were noted. Field measurements of DO and temperature are reported in Table D-2.

Samples collected for bacterial examination were mailed or delivered to the laboratory. Every effort was made to get the samples to the laboratory as quickly as possible. Results of bacterial determinations presented in this appendix should be considered as qualitative. Undue weight should not be given to the values for quantitative purposes.

Data from operational stations are shown separately at the end of the table. These data consist of analyses of South Bay Aqueduct water.

### Summary of Coliform Analyses

Coliform data included in Table D-2 are made more usable by summarizing the results of the analyses of the 24 samples collected at each station during the year. Table D-3 is a summary of these analyses.

### Spectrographic Analyses of Surface Water

Spectrographic analyses were made to determine the concentration of 17 different metals in surface water samples. Most of these metals are present in very small amounts and are often called trace metals. The concentrations indicated in Table D-4 are in parts per billion instead of parts per million

which is commonly used in reference to concentrations of mineral constituents.

The symbols included with the constituent quantities are:

< Less than the amount indicated.

$\leq$  Equal to or slightly less than the amount indicated.

#### Radioassays of Surface Water

Table D-5, "Radioassays of Surface Water", presents the radioactivity of surface water samples collected at 24 monitoring stations. The samples were collected in May and September at the same time that samples were collected for standard mineral analyses shown on Table D-2. The methods and procedures of sample preparation and determination of radioactivity in surface water are described in "Standard Methods for the Examination of Water and Sewage, 11th Edition".

Results are expressed as pico curies per liter (pc/l). The term pico curies is also written micro-micro curies and is further defined as  $10^{-12}$  curies. Four values are reported for each sample: (a) beta activity in the solids retained on the filter (suspended material), (b) beta activity in the filtrate (dissolved material), (c) alpha activity in the solids, and (d) alpha activity in the filtrate. Sample counts are corrected for background and geometric efficiency. Standard statistical procedures are utilized to compute the 0.9 error. The final result is expressed (symbolically) as  $x \pm y$  pc/l. This means that in a series of determinations on the same sample, the value of  $x$  should fall between  $x - y$  and  $x + y$  90 percent of the time.

#### Salinity Observations at Bay and Delta Stations

Table D-6 describes the ten stations for which salinity data are listed in Table D-7 and includes maximum observed salinity at bay and delta stations.

Table D-7 presents chloride concentrations of samples collected at ten stations between Sbrante Beach and Collinsville for the period October 1, 1962 through June 30, 1963. From July 1, 1963 through September 30, 1963, samples were collected from only six of the stations.

#### Electrical Conductance

Data from two electrical conductivity recorders are present in Figures D-1 and D-2. These data are machine prepared graphs. Daily mean values are plotted in Figure D-1 and single daily reading at 1300 hours are plotted in Figure D-2. Each figure or graph presents the data from a station. The beginning of the continuous conductivity record occurred during 1963 and is indicated by the beginning of the graph on each figure.

**TABLE D-1**  
**SAMPLING STATION DATA AND INDEX**

Station	Station Number	Location <sup>a</sup>	Beginning of Record	Station C Type	Sampled by <sup>d</sup>	Analysis on page
ALAMEDA CREEK NEAR MILES	73	4S/1W-15	Dec., 1951	M	DWR	D-23
ALAMEDA CREEK NEAR MILES	73	4S/1W-15	Dec., 1959	M	USGS	D-20
ALISAL CREEK ON OLD STAGE ROAD NEAR SALINAS	200	14S/4E-30	e	M	MCFWCWD	D-40
ALTAMONT CREEK AT ALTAMONT TURNOUT OF SOUTH BAY AQUEDUCT	201	2S/3E-31	June, 1962	O	DWR	D-27
ARROYO DE LA LAGUNA AT VERONA	202	3S/1E-29	Dec., 1959	M	USGS	D-23
ARROYO DEL VALLE NEAR LIVERMORE	71	4S/2E-4	July, 1958	M	DWR	D-26
ARROYO SECO RIVER NEAR SOLEDAD	203	19S/6E-16	e	M	MCFWCWD	D-42
BEAN CREEK ONE MILE EAST OF FELTON	204	10S/2W-22	Aug., 1963	I	DWR	D-32
BEAR CREEK AT BOULDER CREEK	205	9S/2W-30	Aug., 1963	I	DWR	D-34
BEAR CREEK FOUR MILES NORTHEAST OF BOULDER CREEK	206	9S/2W-10	Aug., 1963	I	DWR	D-34
BENICIA	235	38°02' Lat <sup>b</sup> 122°09' Long	1944	M	DWR	D-57
BETHANY FOREBAY AT SOUTH BAY PUMPING PLANT	207	2S/3E-10	April, 1962	O	DWR	D-48
BIG RIVER NEAR MOUTH	8c	17N/17W-24	Jan., 1959	M	DWR	D-12
BOULDER CREEK AT BOULDER CREEK	208	9S/2W-30	Aug., 1963	I	DWR	D-34
BRANCFORTE CREEK NEAR SANTA CRUZ	209	11S/1W-7	Aug., 1963	I	DWR	D-31
CARMEL RIVER AT ROBLES DEL RIO	83	17S/2E-2	Jan., 1952	M	DWR	D-47
CLEAR CREEK AT BROOKDALE	210	9S/2W-32	Aug., 1963	I	DWR	D-34
COLLINSVILLE	236	38°04' Lat <sup>b</sup> 121°51' Long	1924	M	DWR	D-57
COYOTE CREEK NEAR MADRONE	82	9S/3E-9	Jan., 1952	M	DWR	D-29
CROCKETT	237	38°03' Lat <sup>b</sup> 122°13' Long	1946	M	DWR	D-57
FALL CREEK ONE-HALF MILE NORTH OF FELTON	211	10S/2W-16	Aug., 1963	I	DWR	D-33
GABILAN CREEK ON OLD STAGE ROAD NEAR SALINAS	212	13S/3E-35	e	M	MCFWCWD	D-39
GUADALUPE RIVER, SOUTH FORK, NEAR ANNAPOLIS	9a	10N/14W	Jan., 1959	M	DWR	D-14
INNISFAIR FERRY	238	38°11' Lat <sup>b</sup> 121°58' Long	1929	M	DWR	D-57
KINGS CREEK TWO MILES NORTH OF BOULDER CREEK	213	9S/2W-18	Aug., 1963	I	DWR	D-35
LIVERMORE CANAL AT PATTERSON RESERVOIR	214	3S/3E-6	Aug., 1962	O	DWR	D-50
LOMPICO CREEK ONE MILE NORTH OF OLYMPIA	215	10S/2W-11	Aug., 1963	I	DWR	D-33
LOS GATOS CREEK NEAR LOS GATOS	74	8S/1W-29	Dec., 1951	M	DWR	D-28
LOVE CREEK AT BEN LOMOND	216	10S/2W-4	Aug., 1963	I	DWR	D-34
MARTINEZ	239	38°02' Lat <sup>b</sup> 122°08' Long	1926	M	DWR	D-57
NACIMIENTO LAKE AT DAM NEAR SAN MIGUEL	217	25S/10E-15	e	M	MCFWCWD	D-46
NACIMIENTO RIVER NEAR SAN MIGUEL	43b	25S/11E-4	July, 1958	M	DWR	D-45
NAPA RIVER NEAR ST. HELENA	72	8N/5W-33	Dec., 1951	M	DWR	D-19
NATIVIDAD CREEK ON OLD STAGE ROAD NEAR SALINAS	218	14S/3E-12	e	M	MCFWCWD	D-40
NAVARRO RIVER NEAR NAVARRO	8b	15N/16W-7	Jan., 1959	M	DWR	D-13
NEWELL CREEK ONE MILE NORTHEAST OF BEN LOMOND	219	10S/2W-3	Aug., 1963	I	DWR	D-33
NOYO RIVER NEAR FORT BRAGG	10c	18N/17W-10	Jan., 1959	M	DWR	D-11

a Locations are referenced to Mt. Diablo Base and Meridian.

b Locations given in latitude and longitude because the areas have not been surveyed for township, range, and section.

c M-Monitoring, I-Investigational, O-Operational.

d DWR-Department of Water Resources, USGS-United States Geological Survey, MCFWCWD-Monterey County Flood Control and Water Conservation District.

e Beginning of record prior to 1950.

**TABLE D-1**  
**SAMPLING STATION DATA AND INDEX**

Station	Station Number	Location <sup>a</sup>	Beginning of Record	Station Type <sup>c</sup>	Sampled by <sup>d</sup>	Analysis on page
PAJARO RIVER NEAR CHITTENDEN	77	12S/3E-12	Dec., 1951	M	DWR	D-36
PANCHO RICO CREEK NEAR SAN ARDO	220	22S/10E-16	e	M	MCFCWCD	D-42
PITTSBURG	240	38°02' Lat <sup>b</sup> 121°53' Long	1945	M	DWR	D-57
PORT CHICAGO	241	38°04' Lat <sup>b</sup> 122°02' Long	1946	M	DWR	D-57
RUSSIAN RIVER, EAST FORK, AT POTTER VALLEY POWERHOUSE	10a	17N/11W-6	May, 1951	M	DWR	D-18
RUSSIAN RIVER AT GUERNEVILLE	10	8N/10W-32	April, 1951	M	DWR	D-15
RUSSIAN RIVER NEAR HEALDSBURG	9	9N/9W-22	April, 1951	M	DWR	D-16
RUSSIAN RIVER NEAR HOPLAND	8a	14N/12W-36	April, 1951	M	DWR	D-17
SALINAS RIVER NEAR BRADLEY	43c	23S/10E-15	July, 1958	M	DWR	D-42
SALINAS RIVER AT CHUALAR BRIDGE NEAR CHUALAR	221	16S/4E-8	e	M	MCFCWCD	D-41
SALINAS RIVER AT NILLTOWN BRIDGE NEAR SPRECKELS	222	15S/3E-18	e	M	MCFCWCD	D-41
SALINAS RIVER AT PASO ROBLES	43a	26S/12E-28	April, 1951	M	DWR	D-46
SALINAS RIVER AT SAN ARDO BRIDGE NEAR SAN ARDO	223	22S/10E-17	e	M	MCFCWCD	D-42
SALINAS RIVER AT SAN LUCAS BRIDGE NEAR SAN LUCAS	224	21S/9E-8	e	M	MCFCWCD	D-42
SALINAS RIVER NEAR SPRECKELS	43	15S/3E-18	April, 1951	M	DWR	D-40
SAN ANTONIO RIVER AT PLEYTO BRIDGE NEAR PLEYTO	225	24S/9E-3	e	M	MCFCWCD	D-43
SAN ANTONIO RIVER NEAR PLEYTO	43d	24S/9E-3	July, 1958	M	DWR	D-44
SAN BENITO RIVER NEAR BEAR VALLEY FIRE STATION	77a	15S/7E-28	July, 1958	M	DWR	D-37
SAN LORENZO RIVER AT BIG TREES	226	10S/2W-27	Aug., 1963	I	DWR	D-31
SAN LORENZO RIVER AT BIG TREES NEAR FELTON	75	10S/2W-27	Dec., 1951	M	DWR	D-31
SAN LORENZO RIVER AT BOULDER CREEK	227	9S/2W-30	Aug., 1963	I	DWR	D-35
SAN LORENZO RIVER SIX MILES NORTH OF BOULDER CREEK	228	8S/3W-25	Aug., 1963	I	DWR	D-35
SAN LORENZO RIVER AT FELTON	229	10S/2W-22	Aug., 1963	I	DWR	D-33
SAN LORENZO RIVER AT SANTA CRUZ	230	11S/2W-12	Aug., 1963	I	DWR	D-31
SOBRANTE BEACH	242	38°00' Lat <sup>b</sup> 122°20' Long	1961	M	DWR	D-57
SOQUEL CREEK AT SOQUEL	76	11S/11W-10	Dec., 1951	M	DWR	D-35
SPOONBILL CREEK	243	38°04' Lat <sup>b</sup> 121°54' Long	1957	M	DWR	D-57
TORD CREEK AT HIGHWAY 117 BRIDGE NEAR SALINAS	231	15S/2E-35	e	M	MCFCWCD	D-40
TWO BAR CREEK ONE MILE NORTH OF BOULDER CREEK	232	9S/2W-19	Aug., 1963	I	DWR	D-35
UVAS CREEK NEAR MORGAN HILL	96	10S/3E-17	July, 1952	M	DWR	D-38
WEST SUISUN	244	38°05' Lat <sup>b</sup> 122°06' Long	1946	M	DWR	D-57
ZAYANTE CREEK AT FELTON	233	10S/2W-22	Aug., 1963	I	DWR	D-32
ZAYANTE CREEK AT ZAYANTE	234	10S/2W-2	Aug., 1963	I	DWR	D-33

a Locations are referenced to Mt. Diablo Base and Meridian.

b Locations given in latitude and longitude because the areas have not been surveyed for township, range, and section.

c M-Monitoring, I-Investigational, O-Operational.

d DWR-Department of Water Resources, USGS-United States Geological Survey, MCFCWCD-Monterey County Flood Control and Water Conservation District.

e Beginning of record prior to 1950.



# ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

Date and time sampled P.S.T.	Dissolved Temp. in °F	Specific conductivity at 25°C µmhos/cm	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub> Total ppm	Turbidity in nephelometric units	Analyzed by
			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron-Silica (B) (SiO <sub>2</sub> )				
10-9-62 1550	51	60	9.0	90	168	7.3	1.26	0.52	12	0.87	0.00	1.43	0.00	0.00	0.27	13.
11-14-62 1330	24	50	11.1	98	170	7.9	1.20	0.44	10	0.88	0.00	1.44	0.00	0.00	0.21	50.
12-11-62 1345	125	49	11.9	103	134	8.0	0.99	0.37	8.5	0.69	0.00	1.13	0.00	0.00	0.17	62.
1-3-63 1200	72	48	10.8	93	142	7.7	1.04	0.37	8.6	0.74	0.00	1.21	0.00	0.00	0.21	13.
2-12-63 1220	280	55	10.5	99	116	7.5	0.80	0.35	8.1	0.56	0.00	0.92	0.00	0.00	0.17	2.3
3-12-63 1255	63	52	11.5	104	143	7.6	1.06	0.34	7.8	0.72	0.00	1.18	0.00	0.00	0.24	62.
4-10-63 1400	1,600	52	10.5	95	89	7.5	0.63	0.23	5.2	0.41	0.00	0.67	0.00	0.00	0.17	62.
5-7-63 1030	122	56	10.4	99	128	7.6	0.60	0.33	7.6	0.66	0.00	1.05	0.00	0.00	0.16	23.0.
6-13-63 0815	36	60	9.6	96	153	8.2	1.10	0.40	9.3	0.80	0.00	1.31	0.00	0.00	0.21	23.
7-10-63 1000	20	66	9.0	96	160	8.2	1.30	0.48	11	0.81	0.00	1.33	0.00	0.00	0.24	2.3
8-7-63 1440	12	68	9.7	106	165	8.1	1.19	0.44	10	0.80	0.00	1.31	0.00	0.00	0.25	5.0
9-13-63 0900	5.7	66	8.9	95	170	8.0	0.80	0.42	10	0.83	0.00	1.36	0.00	0.00	0.26	2.3

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs. TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Office of Water Branch, (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFC); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Lamont Testing Laboratories, Inc. (LTL); or California Department of Water Resources (DWR), as indicated.

continued next page

TABLE D-2

## ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

Date and time sampled P.S.T.	Discharge Temp in cfs in 6 ft	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million												Total dissolved solids in ppm	Percent total dissolved in ppm	Hardness as CaCO <sub>3</sub> in ppm	Turbidity in NTU	Analyzed by		
					equivalents per million																		
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )						Other constituents	
BIG RIVER NEAR MOUTH (STN. 8c)																							
10-9-62	25 (ext)	60	9.3	94	7.3	1.70 <sup>c</sup>	13	0.57	0	122	0	2.00	9.6	0.27		0.3		138 <sup>e</sup>	25	89	0	2	USGS
11-14-62	20 (ext)	51	10.5	95	7.4	1.76 <sup>c</sup>	12	0.52	0	125	0	2.05	7.2	0.20		0.4		141 <sup>e</sup>	23	88	0	4	
12-11-62	380 (ext)	49	10.6	93	7.3	1.31 <sup>c</sup>	9.8	0.43	0	89	0	1.46	1.2	0.03		0.2		105 <sup>e</sup>	25	65	0	35	
1-3-63	130 (ext)	47	10.7	91	7.3	1.43 <sup>c</sup>	9.9	0.43	0	96	0	1.57	1.0	0.28		0.1		116 <sup>e</sup>	23	71	0	10	
2-12-63	600 (ext)	52	10.6	97	7.2	1.10 <sup>c</sup>	8.4	0.37	0	74	0	1.21	4.8	0.14		0.0		92 <sup>e</sup>	25	55	0	25	
3-12-63	120 (ext)	50	11.2	99	7.2	1.34 <sup>c</sup>	9.0	0.39	0	89	0	1.46	7.0	0.20		0.1		111 <sup>e</sup>	23	67	0	1	
4-10-63	400 (ext)	53	11.2	104	7.7	0.80 <sup>c</sup>	5.5	0.24	0	53	0	0.87	4.8	0.14		0.0		65 <sup>e</sup>	23	40	0	60	
5-7-63	170 (ext)	58	9.8	97	7.3	0.80	6.1	0.37	1.3	0	87	7.0	5.8	0.2	0.2	0.1	18	101 <sup>g</sup>	22	65	0	25	
6-12-63	50 (ext)	65	10.0	107	8.3	2.12 <sup>c</sup>	17	0.74	0.07	122	2	2.00	1.8	0.54		0.5		186 <sup>e</sup>	26	106	3	5	
7-10-63	15 (ext)	66	9.5	103	8.1	1.84 <sup>c</sup>	12	0.52	0.00	118	0	1.93	8.0	0.23		0.4		136 <sup>e</sup>	22	92	0	5	
8-7-63	10 (ext)	69	10.6	119	8.3	1.72 <sup>c</sup>	12	0.52	0.03	119	1	1.95	9.5	0.27		0.1		138 <sup>e</sup>	23	86	0	1	
9-13-63	5 (ext)	66	8.2	88.6	7.3	22	8.5	1.1	1.7	0	123	6.0	0.2	0.2	0.2	0.2	16	127 <sup>g</sup>	21	90	0	2	
1000					8.0	1.10	0.70	0.48	0.04	0.00	2.02	0.12	0.27	0.01	0.01								
As = 0.01 Mn = 0.02 Fe = 0.05																							

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Departmental Water Resources (DWR), as indicated.

Date and time sampled P.S.T.	Dewpoint in °C in °F	Dissolved oxygen ppm	Specific conductance at 25°C µmhos/cm	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent total solid in ppm	Hardness as CaCO <sub>3</sub> Total H.C. ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by					
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbon- dioxide (CO <sub>2</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)							Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents		
NAVARRO RIVER NEAR NAVARRO (STA. #B)																								
10-9-62	22	6.3	9.1	94	266	7.3	7.3	16	0.61	0	152	2.43	12	0.14	0.1	162 <sup>e</sup>	21	111	0	1	2.3	2.3	USGS	
11-3-62	50	11.4	92	275	7.7	7.7	13	0.57	0	154	2.52	9.0	0.25	0.5	0.5	167 <sup>e</sup>	19	118	0	2	6.2	6.2	USGS	
12-11-62	165	4.9	10.8	94	227	7.3	7.3	11	0.48	0.03	198	1.98	7.5	0.21	0.1	138 <sup>e</sup>	20	94	0	6	23.0	23.0	USGS	
1-3-63	140	4.9	10.5	91	234	7.3	7.3	12	0.52	0	126	2.07	10	0.1	0.1	142 <sup>e</sup>	21	98	0	5	2.3	2.3	USGS	
2-12-63	1,050	54	10.2	95	164	7.4	7.4	8	0.38	0	84	1.38	5.0	0.14	0.0	100 <sup>e</sup>	23	65	0	70	62	62	USGS	
3-12-63	205	52	10.8	98	232	7.5	7.5	10	0.44	0	125	2.05	7.3	0.21	0.1	141 <sup>e</sup>	19	96	0	2	62	62	USGS	
4-10-63	2,830	53	10.8	99	125	7.7	7.7	6.2	0.29	0.00	63	1.03	6.6	0.19	0.0	76 <sup>e</sup>	23	50	0	190	230	230	USGS	
5-7-63	363	60	9.6	96	203	7.4	7.4	8.0	0.42	0.04	111	1.82	6.0	0.17	0.1	122 <sup>e</sup>	20	83	0	3	6.2	6.2	USGS	
6-13-63	90	65	9.4	99	250	8.2	8.2	12	0.52	0.00	142	2.33	7.6	0.21	0.1	152 <sup>e</sup>	20	106	0	5	2.3	2.3	USGS	
7-10-63	45	71	10.5	118	259	7.7	7.7	13	0.57	0.13	139	2.28	9.4	0.27	0.2	157 <sup>e</sup>	20	117	0	7	2.1	2.1	USGS	
8-7-63	18	71	10.0	112	268	7.7	7.7	13	0.57	0.00	148	2.43	10	0.28	0.0	163 <sup>e</sup>	20	112	0	1	2.3	2.3	USGS	
9-13-63	13	70	8.9	99	268	7.8	7.8	27	1.35	0	148	2.43	10	0.21	0.1	154 <sup>e</sup>	20	112	0	5	62	62	USGS	
11-10								13	0.57	0.05	143	2.43	9.5	0.27	0.01									USGS
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a. Field pH

b. Laboratory pH

c. Sum of calcium and magnesium in ppm

d. Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e. Derived from conductivity vs. TDS curves

f. Determined by addition of analyzed constituent.

g. Gravimetric determination

h. Annual median and range, respectively

i. Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWSD); Los Angeles Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2

## ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

Date and time sampled P.S.T.	Discharge Temp in °F	Dissolved oxygen ppm	Specific conductance (at 25°C)	pH	Major constituents in parts per million										Total dissolved solids in ppm	Per- cent solids in ppm	Hardness as CaCO <sub>3</sub> Total ppm	Turbidity in ppm	Analyzed by		
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)						Boron (B)	Silica (SiO <sub>2</sub> )
GUALALA RIVER, SOUTH FORK NEAR ANNAPOLIS (STA. 94)																					
10-9-62 0915	9.1	62	6.1	280	7.2 8.0	14 2.37 <sup>c</sup>	0 0.00	159 2.61	12 0.34	0 0.00	159 2.61	0.0	0.0	0.0	172 <sup>e</sup>	20	118	0	2	6.2 62.	USGS
11-13-62 1640	35	56	10.1	96	7.6 8.0	12 2.28 <sup>c</sup>	0 0.00	152 2.49	7.2 0.20	0 0.00	152 2.49	0.2	0.2	0.0	166 <sup>e</sup>	19	114	0	2	62.	
12-10-62 1500	52	49	10.8	94	7.4 8.1	10 1.93 <sup>c</sup>	0 0.00	126 2.03	6.6 0.19	0 0.00	126 2.03	0.0	0.0	0.0	139 <sup>e</sup>	19	96	0	4	2.3 1.3	
1-2-63 1335	82	49	10.8	94	7.5 8.2	9.9 1.90 <sup>c</sup>	0 0.00	119 1.95	7.6 0.21	0 0.00	119 1.95	0.0	0.0	0.0	135 <sup>e</sup>	18	95	0	5	62.	
2-11-63 1610	1,050	56	9.4	89	7.2 7.4	7.6 1.32 <sup>c</sup>	0 0.00	84 1.38	4.5 0.13	0 0.00	84 1.38	0.1	0.1	0.0	97 <sup>e</sup>	20	66	0	70	620. 230.	
3-11-63 1525	108	57	10.7	103	7.8 8.1	9.3 1.88 <sup>c</sup>	0 0.00	121 1.98	7.4 0.21	0 0.00	121 1.98	0.0	0.0	0.0	136 <sup>e</sup>	18	94	0	2	23.	
4-10-63 1000	1,940	56	10.4	99	7.8 7.8	5.9 1.18 <sup>c</sup>	0 0.00	75 1.23	6.6 0.12	0 0.00	75 1.23	0.0	0.0	0.0	88 <sup>e</sup>	18	59	0	50	130. 23.	
5-6-63 1540	248	63	9.9	102	7.1 7.9	9.5 1.00	1.4 0.04	115 1.88	5.0 0.14	0 0.00	115 1.88	0.0	0.0	18	125 <sup>e</sup>	17	89	0	3	6.2 0.7	
6-13-63 1130	52	64	11.5	120	8. 8.0	11 2.08 <sup>c</sup>	0 0.00	136 2.23	7.0 0.20	0 0.00	136 2.23	0.1	0.1	0.0	151 <sup>e</sup>	19	104	0	4	62.	
7-10-63 1500	28	70	11.7	130	8.2 8.4	12 2.36 <sup>c</sup>	2 0.07	144 2.36	7.9 0.22	0 0.00	144 2.36	0.1	0.1	0.0	156 <sup>e</sup>	18	118	0	5	2.3 21.	
8-7-63 1915	17	63	8.1	83	8. 7.7	11 2.20 <sup>c</sup>	0 0.00	143 2.34	8.0 0.23	0 0.00	143 2.34	0.0	0.0	0.0	160 <sup>e</sup>	18	110	0	1	23. 23.	
9-13-63 1330	7.7	72	10.5	119	7.8 8.1	11 1.35	1.9 0.05	148 2.43	9.8 0.28	0 0.00	148 2.43	0.0	0.0	17	155 <sup>e</sup>	18	113	0	1	2.3 2.3	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Annual analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

Date and time sampled P.S.T.	Discharge Temp in cfs	Dissolved oxygen ppm	Specific conductance (microhmals at 25°C)	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent solids in ppm	Hardness as CaCO <sub>3</sub> ppm	Turbidity in ppm	Conform with MPN/ml	Analyzed by	
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbon dioxide (CO <sub>2</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)							Boron (B)
RUSSIAN RIVER AT GUERNSEYVILLE (STA. 10)																				
10-8-62	188	68	265	7.9 8.3	2.41 <sup>c</sup>	10 0.44	0	3	150 2.46	0	0.25	9.0	0.3	157 <sup>e</sup>	15	120	0	8	2.1 6.2	USGS
11-13-62	481	64	269	7.7 8.0	2.36 <sup>c</sup>	9.8 0.43	0	0	141 2.31	0	0.20	7.2	0.5	159 <sup>e</sup>	15	118	2	3	2.3	
12-10-62	730	54	258	7.2 8.1	2.31 <sup>c</sup>	9.3 0.40	0	0	144 2.36	0	0.17	6.2	0.3	153 <sup>e</sup>	15	116	0	20	2.3	
1-2-63	690	52	291	7.4 8.0	2.62 <sup>c</sup>	11 0.48	0	0	160 2.62	0	0.27	9.7	0.2	172 <sup>e</sup>	15	131	0	20	6.2 2.3	
2-11-63	7,310	60	200	7.2 7.8	1.72 <sup>c</sup>	7.8 0.34	0	0	108 1.77	0	0.14	4.8	0.1	118 <sup>e</sup>	17	86	0	70	7,000 1,300	
3-11-63	945	60	115	7.8 8.0	2.37 <sup>c</sup>	9.8 0.43	0	0	156 2.56	0	0.20	7.0	0.3	168 <sup>e</sup>	14	129	1	9	2.3	
4-2-63	11,700	56	174	8.0 8.7	1.46 <sup>c</sup>	5.5 0.24	0	0	86 1.41	0	0.10	3.5	0.0	103 <sup>e</sup>	14	73	2	95	130 620	
5-6-63	2,130	63	245	7.4 8.1	1.13 1.15	1.2 0.35	0	0	137 2.25	13 0.27	4.2 0.03	1.9	0.3	146 <sup>e</sup>	13	112	0	30	13 6.2	
6-13-63	440	70	302	7.7 8.4	2.76 <sup>c</sup>	9.5 0.41	0	0	160 2.62	0	0.19	6.8	0.4	179 <sup>e</sup>	13	138	0	5	6.2 13	
7-11-63	216	77	310	8.2 8.1	2.96 <sup>c</sup>	11 0.48	0	0	178 2.92	0	0.17	6.0	0.4	184 <sup>e</sup>	14	148	2	30	2.3 130	
8-7-63	142	71	304	7.7 8.1	2.85 <sup>c</sup>	8.9 0.39	0	0	174 2.85	0	0.21	7.4	0.1	180 <sup>e</sup>	12	143	0	4	2.3 6.2	
9-13-63	216	72	275	7.6 8.4	1.17 1.35	9.3 0.40	1.2 0.03	5 0.17	150 2.46	11 0.23	4.8 0.14	0.8 0.01	0.2 0.01	163 <sup>e</sup>	14	126	0	30	2.3 6.2	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LADPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2

## ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

Date and time sampled P.S.T.	Discharge Temp in °F	Dissolved oxygen ppm	Specific conductance at 25°C a b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Hard- ness as CaCO <sub>3</sub> Total in ppm	Turb- idity in ppm	Analyzed by 1				
				Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sum (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)					Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents	
10-8-62 1440	189	70	9.7	108	242	7.8	2.25 <sup>c</sup>	9.0	0.39	0	144	0.00	2.36	0.3	0.3	144 <sup>e</sup>	15	112	0	3	62. 230.
11-15-62 1445	440	57	13.0	125	237	8.2	2.14 <sup>c</sup>	8.1	0.35	0	136	0.00	2.23	0.5	0.5	141 <sup>e</sup>	14	107	0	4	2. 2.1
12-10-62 1055	388	52	9.8	89	252	7.5	2.32 <sup>c</sup>	8.5	0.37	0	143	0.00	2.34	0.4	0.4	149 <sup>e</sup>	14	116	0	20	23. 2.3
1-2-63 1205	486	52	10.4	94	286	7.7	2.68 <sup>c</sup>	9.2	0.40	0	161	0.00	2.64	0.3	0.3	170 <sup>e</sup>	13	134	2	5	6.2 7,000. 230.
2-11-63 1255	2,670	60	10.1	101	202	7.7	1.92 <sup>c</sup>	6.5	0.28	0	115	0.00	1.88	0.3	0.3	120 <sup>e</sup>	13	96	2	50	
3-11-63 1205	891	59	11.5	113	255	7.8	2.33 <sup>c</sup>	7.5	0.33	0	144	0.00	2.36	0.3	0.3	151 <sup>e</sup>	12	117	0	20	50. 62.
4-11-63 1545	5,580	54	11.8	110	175	8.0	1.59 <sup>c</sup>	5.2	0.23	0	98	0.00	1.61	0.0	0.0	104 <sup>e</sup>	13	79	0	160	230. 230.
5-6-63 1145	1,520	63	10.1	104	235	7.8	1.12	6.8	0.30	0	137	0.00	2.25	0.2	0.2	147 <sup>e</sup>	12	111	0	5	6.2 230.
6-11-63 1140	360	70	8.9	99	287	8.2	2.76 <sup>c</sup>	8.3	0.36	0	168	0.00	2.75	0.4	0.4	170 <sup>e</sup>	12	138	0	2	2.3 1.2
7-9-63 1315	220	79	10.0	123	288	8.0	2.74 <sup>c</sup>	9.2	0.40	0	168	0.00	2.75	0.5	0.5	171 <sup>e</sup>	13	137	0	5	23. 6.2
8-6-63 1110	160	73	9.8	113	287	8.0	2.66 <sup>c</sup>	9.2	0.40	0	160	0.00	2.72	0.2	0.2	170 <sup>e</sup>	13	133	2	2	2.1 2.1
9-11-63 1530	220	74	9.1	106	245	8.2	1.25	7.4	0.32	0	141	0.00	2.31	0.3	0.3	138 <sup>e</sup>	12	114	0	2	2.1 2.1

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWSD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.



## ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen in ppm	Specific conductance (microhmals at 25°C)	pH	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent solid in ppm	Hardness as CaCO <sub>3</sub> in ppm	Total N in ppm	Total P in ppm	Coliform MPN/ml	Analyzed by											
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)								Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents								
RUSSIAN RIVER NEAR HOPLAND (Sta. 8a)																																	
10-10-62 1335	236	66	9.4	102	7.5		1.62 <sup>c</sup>	8.9		0	103		6.9				0.3	112 <sup>e</sup>	19	81	0	7	62-21.										
11-15-62 1315	345	56	10.0	97	7.4		1.54 <sup>c</sup>	6.7		0	102		4.0				0.6	104 <sup>e</sup>	16	77	0	15	50-13.										
12-12-62 1030	900	52	9.8	90	7.3		1.42 <sup>c</sup>	7.2		0	90		3.6				0.3	96 <sup>e</sup>	18	71	0	25	62-2,400.										
1-4-63 1215	124	51	10.6	96	7.3		2.10 <sup>c</sup>	11		0	130		7.8				0.4	143 <sup>e</sup>	19	105	0	5	2-3										
2-13-63 1035	1,300	54	9.8	93	7.2		1.34 <sup>c</sup>	6.4		0	84		3.5				0.4	92 <sup>e</sup>	17	67	0	50	62-230.										
3-13-63 1130	468	53	10.8	101	7.2		1.54 <sup>c</sup>	6.7		0	93		5.0				0.3	106 <sup>e</sup>	16	77	1	50	620-230.										
4-11-63 1330	3,820	52	10.4	96	7.6		1.28 <sup>c</sup>	5.2		0	80		3.5				0.1	87 <sup>e</sup>	15	64	0	50	230-23.										
5-8-63 0735	527	53	9.6	89	7.3		8.1	7.1	1.2	0	106	9.0	3.0	2.0	0.1	0.2	13	118 <sup>e</sup>	15	86	0	25	620-62.										
6-11-63 1000	156	68	10.2	113	8.5		1.78 <sup>c</sup>	6.8		3	108		4.4				0.3	118 <sup>e</sup>	14	89	0	10	5-5.										
7-5-63 1120	185	66	10.5	114	7.6		1.76 <sup>c</sup>	7.0		0	106		4.5				0.2	113 <sup>e</sup>	15	88	1	10	13-62.										
8-4-63 0945	163	66	10.5	114	7.6		1.61 <sup>c</sup>	6.6		0	98		5.0				0.0	107 <sup>e</sup>	15	80	0	2	6-2										
9-11-63 1410	244	68	10.0	111	7.9		2.7	5.7	0.9	0	96	7.0	3.0	1.3	0.1	0.1	12	104 <sup>e</sup>	14	79	0	4	23-13.										

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Annual analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

3255-4-61 6-63 200 290

TABLE D-2  
ANALYSES OF SURFACE WATER  
NORTH COASTAL REGION (NO. 1)

Date and time sampled P.S.T.	Discharge Temp in cfs	Dissolved oxygen in of ppm	Specific conductance (microhm at 25°C) g S	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per- cent sulfate in ppm	Hardness as CaCO <sub>3</sub> Total (ppm)	Tur- bidity in ppm	Analyzed by	
				Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)						Boro- silica (B)
RUSSIAN RIVER, EAST FORK AT POTTER VALLEY POWERHOUSE (STA. 10+4)																			
10-10-62 1155	338	63	8.4	90	7.5	1.20 <sup>c</sup>	0.27	6.2	0.00	8.2	1.43	5.4	0.15	0.3	97 <sup>e</sup>	16	70	0	620. 23.
11-15-62 1145	309	54	10.1	97	7.6	1.28 <sup>c</sup>	0.26	6.0	0.00	8.2	1.34	3.5	0.10	0.6	90 <sup>e</sup>	17	64	0	6.2 23.
12-12-62 0905	302	46	10.4	90	7.2	1.27 <sup>c</sup>	0.24	5.5	0.00	8.0	1.31	2.8	0.08	0.4	87 <sup>e</sup>	16	64	0	13. 62.
1-4-63 1035	307	44	10.9	92	7.3	1.32 <sup>c</sup>	0.26	6.0	0.00	8.2	1.34	5.6	0.16	0.3	90 <sup>e</sup>	16	66	0	0.23 0.5
2-13-63 0905	299	50	11.2	102	7.5	0.98 <sup>c</sup>	0.14	3.3	0.00	6.0	0.98	1.2	0.03	0.1	65 <sup>e</sup>	13	48	0	62. 13.
3-13-63 1005	185	49	10.7	96	7.3	1.24 <sup>c</sup>	0.17	3.9	0.00	7.6	1.25	2.8	0.08	0.2	84 <sup>e</sup>	12	62	0	6.2 2.3
4-11-63 1130	384	48	10.9	97	8.1	1.03 <sup>c</sup>	0.14	3.3	0.00	6.4	1.05	2.0	0.06	0.0	69 <sup>e</sup>	12	51	0	23. 2.3
5-7-63 1550	300	59	10.0	102	7.4	0.5 <sup>c</sup>	0.17	0.01	0.00	7.3	5.2	1.7	0.5	0.2	86 <sup>e</sup>	12	60	0	23. 0.62
6-11-63 0900	267	59	9.8	100	7.2	1.23 <sup>c</sup>	0.19	4.3	0.00	8.0	1.31	1.6	0.05	0.3	84 <sup>e</sup>	13	62	0	2.3 2.3
7-9-63 1015	263	60	9.7	100	7.6	1.32 <sup>c</sup>	0.18	4.1	0.00	7.9	1.29	2.4	0.07	0.3	82 <sup>e</sup>	12	66	1	2.3 2.3
8-6-63 0830	284	65	9.8	107	7.2	1.27 <sup>c</sup>	0.18	4.2	0.00	7.6	1.25	2.6	0.07	0.0	84 <sup>e</sup>	12	63	1	4 0.5
9-11-63 1245	278	69	8.9	101	7.5	0.6 <sup>c</sup>	0.21	0.02	0.10	8.2	6.0	3.0	0.6	0.3	96 <sup>e</sup>	13	69	0	6.2 50.

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in gpm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Fil-  
d  
Central District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of  
Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.



## ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (NO. 2)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance at 25°C $\frac{a}{b}$	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent acid-soluble in ppm	Hardness as CaCO <sub>3</sub> Total in ppm	Turbidity in ppm	Conformity MPN/ml	Analyzed by 1
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO <sub>3</sub> )	Bicarbonates (HCO <sub>3</sub> )	Sulfates (SO <sub>4</sub> )	Chlorides (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)						
NAPA RIVER NEAR ST. HELENA (STA. 72)																				
10-10-62 1605	1.3	65	4.2	45	3.38 <sup>c</sup>	18	0.78	0	0.00	1.94	12	0.34	0.1	261 <sup>e</sup>	19	169	10	45	620.	
11-15-62 1700	11	57	12.6	122	1.86 <sup>c</sup>	30	1.30	0	0.00	1.20	30	0.85	0.2	211 <sup>e</sup>	41	93	0	3	62.	
12-12-62 1230	15	52	8.6	78	1.87 <sup>c</sup>	22	0.96	0	0.00	1.13	18	0.51	0.5	182 <sup>e</sup>	34	93	0	2	230.	
1-4-63 1425	38	52	9.4	86	1.68 <sup>c</sup>	16	0.70	0	0.00	0.94	16	0.45	0.2	158 <sup>e</sup>	29	84	7	5	230.	
2-13-63 1235	835	58	10.0	98	0.82 <sup>c</sup>	2.3	0.32	0	0.00	0.50	4.5	0.13	0.0	75 <sup>e</sup>	28	41	0	170	2,400. +	
3-13-63 1325	36	60	13.9	140	1.84 <sup>c</sup>	16	0.70	0	0.00	1.10	12	0.34	0.2	168 <sup>e</sup>	28	92	0	2	130.	
4-11-63 1745	370	55	10.2	97	0.97 <sup>c</sup>	8.0	0.35	0	0.00	0.64	4.3	0.12	0.1	90 <sup>e</sup>	27	49	0	30	2,400.	
5-8-63 1000	57	57	9.6	93	0.68	13	0.57	2.0	0	1.03	9.0	0.25	0.4	158 <sup>e</sup>	25	82	2	8	7,000. +	
6-11-63 1300	16	75	9.5	113	1.60 <sup>c</sup>	11	0.48	0	0.00	1.12	8.6	0.24	0.2	134 <sup>e</sup>	23	80	0	5	130.	
7-9-63 1420	5.2	76	12.6	151	2.52 <sup>c</sup>	19	0.83	3	0.10	1.38	20	0.56	0.5	221 <sup>e</sup>	25	126	8	1	23.	
8-6-63 1220	2.4	75	9.4	112	2.90 <sup>c</sup>	19	0.83	0	0.00	1.68	16	0.45	0.4	234 <sup>e</sup>	22	145	7	9	62.	
9-11-63 1645	Ponded									2.75									230.	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as  $\frac{0.0}{0.00}$  except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively.

i Mineral analyses made by United States Geological Survey, Quality of Water Bureau (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Tannett Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

32555-0-01 6-63 200 283

TABLE D-2  
ANALYSES OF SURFACE WATER  
SAN FRANCISCO BAY REGION (NO. 2)

Date and time of day P.S.T.	Discharge Temp in °F Mean	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25° C)	pH a b	Mineral constituents in parts per million												Total dissolved in ppm	Fe- as FeCO <sub>3</sub> ppm	Hardness as CaCO <sub>3</sub> ppm	Turbidity MPN/ml	Analyzed by
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )					
10/11-12/62	24		645	7.8	35	19	67	4.1	0	168	41	94	1.7	0.2	0.4	19	367 <sup>8</sup>	46	166	28	USGS
10/13-15/62	323		363	8.2	26	11	30	6.0	0	116	27	33	10	0.5	0.3	16	235 <sup>8</sup>	36	110	15	
10/16-31/62	21		710	7.6	46	22	66	4.7	0	193	56	41	4.8	0.3	0.4	21	426 <sup>8</sup>	41	200	42	
11/5-15/62	17		829	8.0	45	22	85	4.8	0	184	67	128	5.1	0.3	0.5	25	473 <sup>8</sup>	47	203	52	
11/16-30/62	20		890	8.2	49	24	81	5.2	0	190	74	131	7.1	0.4	0.5	22	516 <sup>8</sup>	47	221	65	
12/1-10/62	3.1		903	8.2	61	27	86	4.4	0	250	87	122	1.3	0.4	0.6	16	534 <sup>8</sup>	41	264	59	
12/11-20/62	9.9		886	8.1	62	31	123	6.3	0	280	83	180	8.4	0.4	0.6	13	479 <sup>8</sup>	35	284	54	
12/21-31/62	5.8		1,030	8.1	62	38	96	8.4	0	296	87	130	19	0.5	0.4	20	574 <sup>8</sup>	39	311	68	
1/1-12/63	2.9		1,220	7.5	76	40	125	8.8	0	325	99	169	18	0.4	0.9	22	743 <sup>8</sup>	43	354	88	
1/14-18/63	15		868	7.9	45	24	95	4.8	0	182	65	135	8.2	0.4	0.4	22	512 <sup>8</sup>	49	210	61	
1/19-30/63	11		1,000	7.4	54	25	113	6.8	0	196	80	161	19	0.4	0.7	21	604 <sup>8</sup>	50	237	76	
1/31/63	850		446	7.0	32	14	38	7.4	0	172	30	38	1.8	0.3	0.3	18	36	140	0		
2/1-2/63	2,420		251	8.0	24	8.5	73	2.9	0	115	19	10	3.2	0.4	0.3	12	22	95	1		

Field pH.

Laboratory pH.

Sum of calcium and magnesium in ppm.

Iron (Fe), aluminium (Al), arsenic (As),

Derived from conductivity vs. TDS curves.

<sup>#</sup> Derived from conductivity vs. I/O curves.

Determined by addition of 0.1 ml of 10% sodium hydroxide solution.

9. Gravimetric determination.

Annual median and range, respectively.

Date and time sampled P.S.T.	Discharge Temp in air in °F	Ossolved Oxygen ppm % Sat	Specific Conductance at 25°C	pH	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent inorganic	Headbase in CO <sub>2</sub> ppm	Turbidity in NTU	Analyzed by
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Boron-Boric acid (CO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Bromine (Br)	Silica (SiO <sub>2</sub> )				
2/4-12/63	87		542	7.6	43	21	39	3.7	0	198	61	38	5.2	0.3	0.4	18	Fe		USGS
					2.15	1.69	1.70	0.09	0.00	3.25	1.27	1.07	0.08	0.02			Color		
2/13-18/63	431		373	7.7	32	14	24	3.7	0	180	35	22	3.7	0.4	0.4	14	Fe		
					1.60	1.04	1.04	0.09	0.00	2.62	0.73	0.62	0.06	0.02			Color		
2/19-28/63	32		744	7.7	56	30	58	4.6	0	248	91	58	4.3	0.3	0.5	16	Fe		
					2.77	2.43	2.52	0.12	0.00	4.23	1.89	1.04	0.07	0.02			Color		
3/1-12-63	24		953	7.9	57	29	87	4.7	0	276	105	130	9.0	0.2	0.2	17	Fe		
					2.84	2.36	4.22	0.12	0.00	2.19	3.67	0.15	0.02				Color		
3/16-26/63	31		836	7.8	53	26	81	5.0	0	210	87	104	11	0.3	0.2	16	Fe		
					2.64	2.10	3.52	0.13	0.00	3.44	1.81	2.93	0.18	0.02			Color		
3/28-31/63	367		460	7.7	37	19	30	3.4	0	186	47	76	4.9	0.3	0.3	16	Fe		
					1.85	1.53	1.50	0.09	0.00	3.05	0.98	0.73	0.08	0.02			Color		
4/1-6/63	63		645	8.3	52	27	66	3.6	3	234	73	52	6.0	0.3	0.5	20	Fe		
					2.59	2.23	2.00	0.09	0.10	3.84	1.52	1.47	0.10	0.02			Color		
4/7-17/63	336		430	8.3	37	18	26	2.8	3	181	44	22	3.5	0.2	0.2	18	Fe		
					1.85	1.51	1.13	0.07	0.10	2.97	0.92	0.82	0.06	0.01			Color		
4/18-27/63	270		454	8.2	40	19	28	5.2	0	195	40	25	2.8	0.3	0.3	18	Fe		
					2.00	1.58	1.22	0.13	0.00	3.20	0.83	0.71	0.05	0.02			Color		
4/28-30/63	75		657	7.6	61	25	44	2.6	0	249	76	41	3.0	0.4	0.3	19	Fe		
					3.04	2.02	1.91	0.07	0.00	4.08	1.58	1.16	0.05	0.02			Color		
5/1-10/63	33		776	7.8	65	34	55	3.1	0	283	84	55	3.2	0.3	0.6	17	Fe		
					3.24	2.39	2.39	0.08	0.00	4.64	1.96	1.55	0.05	0.02			Color		
5/11-26/63	18		1,150	8.2	72	51	100	5.0	0	340	138	124	4.8	0.4	0.2	18	Fe		
					4.17	4.35	4.35	0.13	0.00	5.57	2.87	3.50	0.08	0.02			Color		
5/27-30/63	21		890	7.6			80	3.7	0	313	97	111	4.6	0.4	0.2	21	Fe		
							3.48	0.09	0.00	2.02	3.13		0.07	0.02			Color		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganase (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Determined by conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); California Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Lamont Tasting Laboratories, Inc. (TLI), or California Department of Water Resources (DWR); as indicated.

3255-5-64 6-61 200 280

TABLE D-2  
ANALYSES OF SURFACE WATER  
SAN FRANCISCO BAY REGION (NO. 2)

Date and time sampled P.S.T.	Discharge in cfs mean	Temp in °F	Dissolved oxygen ppm	Specific conductance at 25°C	pH	Mineral constituents in equivalents per million												Total dissolved solids in ppm	Per- cent total solids from in ppm	Hardness as CaCO <sub>3</sub> ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by 1
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )						
ALAMEDA CREEK NEAR RILES (STA. 73)																							
6/1-9/63	21	845			8.4	64 3.19	25 2.06	78 3.39	4.0 0.10	7 0.23	212 3.47	88 1.83	100 2.82	5.0 0.08	0.3 0.02	0.8 0.02	21	502 <sup>8</sup>	39	262	76	USGS	
6/10-22/63	16	822			8.4	55 2.74	29 2.42	71 3.09	4.2 0.11	7 0.23	220 3.61	80 1.87	92 2.60	4.3 0.07	0.4 0.02	0.8 0.02	14	470 <sup>8</sup>	37	258	65		
6/23-30/63	20	708			8.0	47 2.35	25 2.08	62 2.70	3.7 0.09	0.00	3.31 1.35	65 2.26	80 2.08	5.2 0.08	0.3 0.02	0.6 0.02	16	402 <sup>8</sup>	37	222	56		
7/1-10/63	19	646			7.6	40 2.00	22 1.78	60 2.61	3.9 0.10	0.00	176 2.88	63 1.36	82 2.31	4.2 0.08	0.3 0.02	0.6 0.02	18	380 <sup>8</sup>	40	189	45		
7/11-20/63	23	728			7.7	50 2.50	27 2.24	61 2.85	4.6 0.12	0.00	224 3.67	64 1.33	85 2.40	5.7 0.09	0.5 0.03	0.5 0.03	19	436 <sup>8</sup>	35	237	53		
7/22-31/63	17	663			8.4	50 2.50	25 2.06	52 2.26	3.1 0.08	7 0.23	207 3.39	66 1.37	65 1.83	4.2 0.08	0.4 0.02	0.6 0.02	17	391 <sup>8</sup>	33	228	47		
8/1-10/63	21	597			7.8	44 2.20	23 1.90	44 1.91	3.4 0.09	0.00	201 3.29	44 0.72	57 1.61	4.1 0.07	0.5 0.03	0.4 0.02	18	343 <sup>8</sup>	31	205	40		
8/11-20/63	28	538			8.0	38 1.90	19 1.60	42 1.83	3.0 0.08	0.00	176 2.88	44 0.92	56 1.58	3.0 0.05	0.4 0.02	0.3 0.02	18	316 <sup>8</sup>	34	175	31		
8/21-31/63	28	547			8.0	37 1.85	19 1.57	44 1.91	2.4 0.06	0.00	174 2.85	44 0.92	61 1.72	2.8 0.05	0.3 0.02	0.4 0.02	17	309 <sup>8</sup>	35	171	28		
9/1-10/63	25	574			8.1	38 1.90	19 1.60	47 2.04	3.1 0.08	0.00	79 2.93	33 0.69	66 1.86	3.1 0.05	0.0 0.00	0.2 0.00	20	337 <sup>8</sup>	36	175	28		
9/11-20/63	22	592			8.1	38 1.90	18 1.50	56 2.35	3.8 0.08	0.00	171 2.80	47 0.98	76 2.09	2.8 0.05	0.0 0.00	0.2 0.00	17	345 <sup>8</sup>	40	170	30		
9/21-30/63	35	661			8.2	38 1.90	20 1.62	66 2.87	3.3 0.08	0.00	172 2.82	50 1.04	92 2.60	3.0 0.05	0.0 0.00	0.3 0.00	22	389 <sup>8</sup>	44	176	35		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in eqm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganase (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Public Health (LADPH); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

# ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (NO. 2)

Date and time sampled P.S.T.	Discharge Temp. in °F	Dissolved oxygen ppm	Specific conductance at 25°C	Major constituents in equivalents per million										Total dissolved solids in ppm	Percent as CaCO <sub>3</sub> from ppm	Hardness as CaCO <sub>3</sub> ppm	Turbidity in NTU	Conform with MFM/ml	Analyzed by
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)						
10-1-62 1340	39	9.8	108	585	7.9	6.9	3.00	0.00	1.6	1.6	8.7	2.45	0.5	352 <sup>a</sup>	50	152	32	90	620, 2,400, 6.2
11-2-62 1625	4.5	58	10.7	104	797	8.0	8.0	0	393	116	116	3.27	0.6	480 <sup>c</sup>	46	210	52	25	6.2
12-5-62 1020	2.1	50	11.2	99	910	8.0	8.0	0	253	116	116	3.22	0.4	548 <sup>c</sup>	42	273	66	5	2.8 6.2
1-10-63 1050	2	65	14.3	118	1,180	8.3	8.3	0	332	166	166	4.08	0.6	710 <sup>c</sup>	39	368	96	15	6.2
2-5-63 1140	120	58	10.3	100	512	7.8	7.8	0	187	34	34	0.96	0.2	308 <sup>c</sup>	28	190	37	90	1,300, 620, 230, 62
4-4-63 1990	199	52	14.4	130	883	8.3	8.3	0	238	105	105	2.96	0.6	532 <sup>c</sup>	39	265	70	4	62
4-8-63 1305	306	59	10.0	98	457	8.1	8.1	0	206	19	19	0.54	0.2	275 <sup>c</sup>	23	184	17	50	620, 1.3 2.3
5-14-63 1330	33	66	9.5	101	1,010	8.6	8.6	0	282	131	96	4.0	0.3	621 <sup>b</sup>	35	357	81	2	6.2
6-5-63 1640	12	72	12.0	136	806	8.6	8.6	0	216	16	16	0.53	0.8	485 <sup>c</sup>	35	272	69	10	230, 21, 620, 21, 2,400, 62
7-1-63 2230	34	66	11.5	123	596	8.2	8.2	0	165	69	69	1.95	0.6	359 <sup>c</sup>	41	172	37	9	620, 21, 2,400, 62
8-6-63 1820	31	72	8.3	94	563	8.1	8.1	0	186	191	158	0.58	0.6	337 <sup>c</sup>	35	176	25	80	620, 21, 2,400, 62
9-4-63 1615	28	70	8.8	98	570	8.2	8.2	0	173	44	58	0.59	0.6	322 <sup>b</sup>	38	169	29	75	620, 21, 2,400, 62
10-1-12/62 110 morning				620	7.8	6.7	3.0	0	169	30	99	2.6	0.2	355 <sup>b</sup>	49	169	27		620, 21, 2,400, 62
10/13-15/62 169 mid. air				376	7.1	2.7	1.1	0	120	37	28	8.3	0.5	243 <sup>b</sup>	33	113	15		620, 21, 2,400, 62

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Mineral median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

3-5-64 (1-64) 20

TABLE D-2

## ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (NO. 2)

Date and time sampled P.S.T.	Discharge in cfs Mean	Temp in °F Mean	Dissolved oxygen ppm	Specific conductance at 25° C µmho/cm	pH	Mineral constituents in equivalents per million												Total dissolved solids in ppm	Per- cent solids in ppm	Hardness as CaCO <sub>3</sub> Total N.C. ppm	Tot- al Hard- ness in ppm	Analyzed by	
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)	Boron (B)	Silice- ous (SiO <sub>2</sub> )						Other constituents
ARROYO DE LA LAGUNA AT VERONA (STA. 202)																							
10/16-31/62	9.3			730	7.5	40 2.0	22 1.6	69 3.00	5.4 0.14	0	176 2.88	54 1.12	106 2.99	5.6 0.09	0.3 0.02	0.6	23	Fe = 0.00 Color = 20	4388	43	190	46	USGS
11/1-12/62	12			810	7.5	40 2.00	22 1.81	87 3.78	4.6 0.12	0	167 2.74	51 1.06	134 3.78	7.7 0.12	0.3 0.02	0.5	23	Fe = 0.00 Color = 10	4778	49	198	53	
11/13-22/62	12			945	7.5	45 2.25	26 1.99	108 4.70	5.9 0.15	0	178 2.92	73 1.52	161 4.56	10 0.16	0.4 0.02	0.4	22	Fe = 0.00 Color = 5	5508	52	212	66	
11/23-30/62	13			846	7.9	43 2.15	22 1.85	95 4.13	5.2 0.13	0	162 2.66	67 1.39	144 4.06	8.8 0.14	0.3 0.02	1.0	21	Fe = 0.00 Color = 15	5028	50	200	67	
12/1-10/62	2.5			1,130	7.9	69 3.44	37 3.06	108 4.70	8.8 0.23	0	222 5.28	71 1.48	168 4.74	2.9 0.13	0.8 0.04	0.8	23	Fe = 0.00 Color = 10	6738	41	32	61	
12/11-19/62	4.8			1,090	7.5	50 2.50	35 2.84	116 4.96	18 0.46	0	274 4.49	67 1.39	148 4.18	35 0.56	0.7 0.04	0.8	23	Fe = 0.00 Color = 50	6768	46	267	42	
12/20-31/62	5			1,580	7.2	39 1.95	55 4.53	195 8.48	3.1 0.08	0	268 4.39	81 1.69	266 7.50	51 0.82	2.5 0.13	0.8	33	Fe = 0.01 Color = 45	8698	56	324	104	
1/1-12/63	2.5			1,630	7.9	71 3.54	63 3.18	176 7.57	18 0.46	0	365 5.98	95 1.98	271 7.64	37 0.60	1.5 0.08	1.3	31	Fe = 0.01 Color = 30	9908	45	436	137	
1/13-18/63	15			906	8.2	47 2.35	24 1.97	100 4.35	4.8 0.12	0	194 3.18	71 1.48	168 4.18	9.8 0.16	0.3 0.02	0.5	23	Fe = 0.00	5248	49	216	57	
1/19-30/63	6.7			1,050	8.3	50 2.50	31 2.57	112 4.67	2.2 0.18	0	202 3.51	82 1.71	171 4.82	16 0.26	0.5 0.03	0.7	26	Fe = 0.00 Color = 1	6218	48	254	77	
1/31/63	140			522	7.0		2.72	56 2.44	10 0.26	0	170 2.79	38 0.79	48 1.35	6.2 0.10	0.5 0.03	0.4	19		45	136	0		
2/1-2/63	8.070			239	7.6		1.86	16 0.61	3.0 0.08	0	113 1.85	17 0.35	4.8 0.16	3.7 0.06	0.5 0.03	0.2	13		24	93	0		
2/3-5/63	119			362	7.8	30 1.50	14 1.18	22 0.96	3.2 0.08	0	149 2.44	34 0.71	31 0.69	5.0 0.08	0.3 0.02	0.3	16		26	134	12		
2/6-12/63	37			602	7.7	45 2.25	23 1.92	46 1.91	4.9 0.13	0	213 3.49	65 1.35	67 1.35	9.0 0.15	0.5 0.03	0.5	20	Fe = 0.00 Color = 35	3708	31	208	73	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in gpm.

d Iron (Fe), aluminum (Al), arsenic (As),

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses (USGS): Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control Authority (SBCTFA);

Central Health (LBPH); Los Angeles County Flood Control Authority (LACFA); Los Angeles Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

$\text{Cr}^{+3}$ , reported here as  $\frac{0.0}{0.00}$  except as shown.



# ANALYSES OF SURFACE WATER

SAN FRANCISCO SAN REGION (NO. 2)

Date and time sampled P.S.T.	Oatcharge Temp in cfe Mean	Dissolved oxygen ppm	Specific conductance at 25°C	pH	Mineral constituents in equivalents per million										Total dis- solved solid- ium in ppm	Per- cent acid- form	Hardness as CaCO <sub>3</sub> Total N.C. ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by 1
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)						
ARROYO DE LA LAGUNA AT VERONA (STA. 202)																				
2/13-18/63	181		376	8.0	31	15	25	3.3	0	164	33	19	4.0	0.4	0.4	17	Fe = 0.02			USGS
2/19-22/63	29		715	7.9	50	28	47	4.3	0	250	80	59	7.1	0.3	0.5	18	Fe = 0.00 Color = 20			
2/23-28/63	9.2		1,150	7.9	67	46	112	6.6	0	335	147	132	9.2	0.4	0.9	19	Fe = 0.00 Color = 17			
3/1-12/63	17		994	7.4	52	28	112	5.4	0	196	101	150	15	0.2	0.8	19	Fe = 0.01 Color = 13			
3/13-24/63	18		921	7.4	50	27	99	7.6	0	203	87	126	20	0.4	0.7	16	Fe = 0.02 Color = 30			
3/25-30/63	81		517	7.8	39	20	39	3.5	0	196	50	37	6.7	0.4	0.5	16	Fe = 0.05 Color = 40			
4/1-3/63	15		582	7.5	42	25	39	3.0	0	226	63	44	4.5	0.2	0.5	16	Fe = 0.04 Color = 22			
4/7-20/63	128		482	7.6	39	20	33	3.4	0	204	48	26	4.9	0.2	0.3	19	Fe = 0.06 Color = 45			
4/21-30/63	58		554	7.8	45	25	36	3.0	0	232	55	35	3.5	0.2	0.3	17	Fe = 0.02 Color = 18			
5/1-8/63	15		753	7.9	59	32	53	3.0	0	271	83	56	4.4	0.3	0.4	16	Fe = 0.00 Color = 8			
5/9-25/63	9.0		1,290	8.2	75	50	131	6.8	0	341	153	155	16	0.3	0.9	18	Fe = 0.01 Color = 14			
5/26-31/63	21		798	7.6	41	22	86	3.7	0	160	67	110	9.3	0.2	0.5	21	Fe = 0.01 Color = 12			
6/1-10/63	19		713	8.0	41	22	72	3.8	0	160	67	97	10	0.2	0.6	24	Fe = 0.06 Color = 15			

a. Field pH.

b. Laboratory pH.

c. Sum of calcium and magnesium in ppm.

d. Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e. Derived from conductivity vs TDS curves.

f. Determined by addition of analyzed constituents.

g. Geometric determination.

h. Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i. Mineral analyses (USCFO); Mineralogical Survey, Quality of Water Branch (USGS); United States Geological Survey, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.



TABLE D-2

## ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (NO. 2)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance at 25°C µmho/cm	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent solids in ppm	Hardness as CaCO <sub>3</sub> Total ppm	Tot - Coliform ity in ppm	Analyzed by
						equivalents per million														
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)					
6/11-20/63	8.1 mean			84.3	7.9	53 2.59	74 2.69	74 3.22	5.1 0.14	0 0.00	226 3.70	74 1.34	107 3.02	6.5 0.10	0.3 0.02	505 <sup>g</sup>	38	254	69	USGS
6/21-30/63	12 mean			626	8.0	48 1.90	21 1.71	56 2.44	3.6 0.09	0 0.00	163 2.67	54 1.12	77 2.17	8.0 0.13	0.1 0.01	375 <sup>g</sup>	40	180	46	
ARROYO DEL VALLE NEAR LIVERMORE (STA. 71)																				
10-1-62	Dry																			
11-5-62	Flooded																			
12-5-62	Flooded																			
1-10-63	0.7	48	8.0	7.8 1140	8.4	76 3.31	76 3.31	76 3.31	0.30 0.51	15 0.30	397 0.51	76 2.14	107 3.02	6.5 0.10	0.3 0.02	646 <sup>g</sup>	28	416	65	3
2-5-63	60	56	9.0	7.8 1100	8.0	76 3.31	76 3.31	76 3.31	0.30 0.51	15 0.30	397 0.51	76 2.14	107 3.02	6.5 0.10	0.3 0.02	268 <sup>g</sup>	19	189	22	3
3-6-63	8.4	54	10.0	8.2 2030	8.5	26 1.13	26 1.13	26 1.13	0.30 0.51	15 0.30	397 0.51	76 2.14	107 3.02	6.5 0.10	0.3 0.02	325 <sup>g</sup>	20	229	17	1
4-8-63	202	59	10.4	8.2 1215	8.4	4.58 1.13	4.58 1.13	4.58 1.13	0.30 0.51	15 0.30	397 0.51	76 2.14	107 3.02	6.5 0.10	0.3 0.02	221 <sup>g</sup>	15	167	11	40
5-14-63	21	68	9.5	8.1 1300	8.3	21 0.96	21 0.96	21 0.96	0.30 0.51	15 0.30	397 0.51	76 2.14	107 3.02	6.5 0.10	0.3 0.02	308 <sup>g</sup>	17	227	16	110
6-5-63	1830	5.0	69	8.2	8.4	4.44 1.26	4.44 1.26	4.44 1.26	0.30 0.51	15 0.30	397 0.51	76 2.14	107 3.02	6.5 0.10	0.3 0.02	318 <sup>g</sup>	22	222	15	5

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported in ppm as 0.0 except as shown.

e Derived from conductivity vs. TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively.

i Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

j Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

# ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (NO. 2)

Date and time analyzed P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25°C)	Mineral constituents in equivalents per million												Total dissolved solids in ppm	Per- cent sulfate in ppm	Hardness as CaCO <sub>3</sub> in ppm	Turbidity in pt./ml	Analyzed by							
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Polysulfate (N)	Bicarbonate (CO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents												
7-1-63 2320	1.6	63	8.2	86	615	8.2	8.4	36	1.57	4	276	0.13	4.52	28	0.79		0.6	378 <sup>e</sup>	23	258	25	1					USGS	
8-5-63 1010	0.7	71	7.0	80	739	8.2		30	2.18	0	348	0.06	5.70	12	0.34		0.8	454 <sup>e</sup>	27	289	4	2						
9-3-63 1045	0.1	70	8.3	94.1	857	7.2	8.2	62	3.2	0	385	0.06	76	56	1.58	0.01	0.02	514 <sup>g</sup>	28	336	20	2						
3-1-63 1315					1,000			22	1.34	6	180	0.20	2.95	187	4.57	0.06	0.01	483 <sup>g</sup>	60	187	30						DRR	
3-18-63 1615					2,170			36	4.64	338	7.5	0	508	113	36.9	5.6	2.0	7.4	1.8	294 <sup>g</sup>	72	270	0					
4-1-63 1230					2,480			28	58	462	3.8	20	650	130	42.3	3.0	1.7	8.4	7.5	1,530 <sup>g</sup>	76	307	0					
4-15-63 1600					984			23	20	157	6.6	0	300	25	150	1.5	0.3	2.4	16	585 <sup>g</sup>	70	139	0					
5-27-63 1250	0.9				722			30	15	88	2.6	0	130	73	108	0.2	0.2	0.92	14	409	58	138	31					
6-10-63 1415					2,290			61	46	412	1.8	0	656	109	374	4.5	1.6	8.6	17	1,321	75	292	0					
7-8-63 1135					2,520			27	1.35	48	242	3.0	35	619	122	64.2	5.3	1.8	9.5	1,510 <sup>g</sup>	80	264	0					
7-22-63 1200					345			19	8.6	36	1.9	0	74	30	48	1.4	0.1	0.14	14	198 <sup>g</sup>	48	83	22					
8-5-63 1355					1,830			11	29	331	3.4	81	237	98	337	0.2	1.0	6.9	1.5	1,050 <sup>g</sup>	84	146	0					

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs. TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWSD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2

## ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (NO. 2)

Date and time of analysis P.S.T.	Discharge Temp in cfs	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO <sub>3</sub> Total Hardness	Tur- bid- ity as CaCO <sub>3</sub> ppm	Coliform bacteria per ml	Analyzed by
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Borate (B)	Silica (SiO <sub>2</sub> )					
8-19-63 1330			367	7.7	20 1.00	10 0.82	36 1.57	1.8 0.05	0 0.00	26 1.44	67 1.32	0.6 0.01	0.1 0.00	0.18 0.00	0.17	216 <sup>a</sup>	44	91	19	DMR
9-3-63 1740			375			1.90 <sup>c</sup>				27 0.56	52 1.47					218 <sup>a</sup>	95			
9-30-63 1330			582		2.68 <sup>c</sup>					42 0.87	90 2.54					342 <sup>a</sup>	134			
10-3-62 1350	0.6	65	960	8.0			36 1.57		0 0.00											USGS
11-7-62 1445	3.0	60	195	7.4			7.5 0.33		0 0.00		5.8 0.16					124 <sup>a</sup>	17	83	26	50
12-4-62 2000	37	53	270	7.6			8.3 0.40		0 0.00		6.8 0.19					172 <sup>a</sup>	15	117	24	21
1-9-63 1530	105	49	281	7.4			12 0.52		0 0.00		8.8 0.25					179 <sup>a</sup>	18	120	27	6.2
2-7-63 1245	300	58	208	7.7			8.2 0.36		0 0.00		5.2 0.15					132 <sup>a</sup>	17	87	12	23
3-6-63 1830	53	53	224	7.7			7.8 0.34		0 0.00		3.2 0.13					142 <sup>a</sup>	15	95	13	6.2
4-10-63 1145	250	54	240	7.5			11 0.48		0 0.00		5.1 0.14					153 <sup>a</sup>	18	110	23	2.3
5-16-63 1715	23	57	285	7.5	32 1.60	11 0.92	9.8 0.43	1.6 0.04	0 0.00	27 0.56	6.2 0.17	1.7 0.03	0.3 0.02	0.0	0.19	190 <sup>a</sup>	14	126	18	0.21
6-4-63 1500	52	54	272	8.5			8.3 0.40		2 0.07	136 2.23	5.2 0.15					173 <sup>a</sup>	14	120	5	6.2

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of California (MWD); Los Angeles Department of Water and Power (LADWP); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (ITL) or California Department of Water Resources (DMR), as indicated.

# ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (NO. 2)

Date and time sampled P.S.T.	Oscilloscope Temp. in °F.	Dissolved oxygen ppm	Specific Conductance (microhmals at 25°C.)	Mineral constituents in ————— parts per million —————										Total dissolved solids in ppm	Per cent solution in ppm	Hardness as CaCO <sub>3</sub> Total ppm	Turbidity in ppm	Analyzed by
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)					
LOS CAYOS CREEK NEAR LOS CAYOS (STA. 744)																		
7-2-63 1145	95	10.3	98	8.2	2.44 <sup>c</sup>	9.8		0	126	7.0				0.0		176 <sup>e</sup>	15	USGS
8-6-63 1710	68	9.5	98	7.8	2.88 <sup>c</sup>	11		3	137	7.1				0.1		197 <sup>e</sup>	14	
9-5-63 0945	69	8.6	96	7.4	1.18	12	2.0	0	160	4.0	4.1	0.3	0.07	0.1	15	229 <sup>g</sup>	14	
				8.2		0.03		0.00	2.62	0.83	0.21	0.07	0.02					
COYOTE CREEK NEAR MAGNONE (STA. 82)																		
10-1-62 1510	Dry			8.2	5.66 <sup>c</sup>	31		8	283	1.0				0.2		371 <sup>e</sup>	19	USGS
11-5-62 1515	16	11.3	117	8.4	6.78 <sup>c</sup>	1.35		0.27	4.64	0.28						447 <sup>e</sup>	20	
12-3-62 1030	1.2	7.9	73	7.7	6.78 <sup>c</sup>	1.70		0.20	5.72	0.93				0.2		486 <sup>e</sup>	23	
1-7-63 1445	1.1	14.3	120	8.1	6.96 <sup>c</sup>	2.04		0	376	1.24				0.2		486 <sup>e</sup>	23	
2-5-63 1300	0.5	58	61	7.9	6.82 <sup>c</sup>	1.48		0.00	6.18	0.76				0.2		447 <sup>g</sup>	18	USGS
3-4-63 1415	25	10.2	99	7.6	1.68 <sup>c</sup>	0.70		0	88	6.5				0.1		122 <sup>g</sup>	29	
4-8-63 1440	12	11.0	110	7.9	2.52 <sup>c</sup>	0.61		0	131	9.1	0.26			0.3		176 <sup>e</sup>	19	
5-14-63 1530	50	10.8	110	289	0.96	0.51	2.2	0	131	8.0	0.26	0.4	0.02	0.1	12	176 <sup>g</sup>	20	
				8.1	12	14	0.06	0.00	2.15	0.62	0.73	0.05	0.07					As = 0.01 Pb = 0.01 PbO <sub>2</sub> = 0.00

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively.

i Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

j Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2  
ANALYSES OF SURFACE WATER  
SAN FRANCISCO BAY REGION (NO. 2)

Date and time sampled P.S.T.	Discharge Temp in cfs in °F	Dissolved oxygen ppm	Specific conductance (microhmals at 25°C)	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent solids in ppm	Hardness as CaCO <sub>3</sub> Total N.C. ppm	Turbid- ity in ppm	Coliform MPN/ml	Analyzed by					
				Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)							Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents		
COVOTE CREEK NEAR MAURONE (STA. 82)																								
6-5-63 1515	90	58	10.5	103	294	8.2	14 2.40	0.61	0	134 0.00	2.20	9.2 0.76			0.2		176 <sup>e</sup>	20	120	10	45	62	62	USGS
7-1-63 1700	139	60	10.2	103	299	6.8 8.1	14 2.48	0.61	0	138 0.00	2.26	10 0.78			0.1		179 <sup>e</sup>	20	124	11	25	62	62	
8-5-63 1215	92	65	10.7	114	310	8.0 8.3	14 2.68	0.61	2 0.07	137 2.25		8.1 0.73			0.2	As = 0.00 ABS = 0.0 Fe <sub>04</sub> = 0.00	185 <sup>e</sup>	19	134	18	2	62	62	
9-5-63 1100	90	66	9.5	103	326	7.7 8.2	13 1.10	15 0.65	1.8 0.03	156 0.00	31 2.56	9.1 0.76	3.0 0.05	0.2 0.01	0.2	11	207 <sup>8</sup>	19	135	7	3	2.3	2.3	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.  
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

# ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (NO. 3)

Date and time sampled P.S.T.	Orecharge Temp in cte	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent acid - um in ppm	Hardness as CaCO <sub>3</sub> ppm	Turbid- ity MPN/ml	Analyzed by I	
				Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Bicar- bonate (CO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)	Boron (B)						Other constituents
BRANCIFORTE CREEK NEAR SANTA CRUZ (STA. 209)																			
8/28/63 1240	1 (est.)	63	559	66 8.2	10 0.85	37 1.61	3.1 0.08	0 0.00	226 55	32 0.90	0.8 0.01	0.4 0.02	0.13 0.02	390 <sup>a</sup>	28	207	22	15	DNR
SAN LORENZO RIVER AT SANTA CRUZ (STA. 230)																			
8/28/63 1315	10 (est.)	70	376	40 8.2	11 0.88	21 0.91	2.3 0.06	0 0.00	141 2.31	42 0.87	0.4 0.01	0.2 0.01	0.10 0.02	232 <sup>a</sup>	24	144	28	0.3	DNR
SAN LORENZO RIVER AT BIG TREES NEAR FELTON (STA. 75)																			
8/28/63 1420	15 (est.)	73	377	46 8.1	5.4 0.44	22 0.96	2.2 0.06	0 0.00	141 2.31	38 0.79	0.5 0.01	0.3 0.02	0.09 0.02	232 <sup>a</sup>	26	137	21	1	DNR
SAN LORENZO RIVER AT BIG TREES NEAR FELTON (STA. 75)																			
10/3/62 1400	17	62	9.7	100	7.9 8.0	2.72 <sup>c</sup>	27 1.17	0 0.00	141 2.31	28 0.79			0.4	242 <sup>e</sup>	30	136	20	4	USGS
11-7-62 1320	27	56	11.4	109	8.0	2.96 <sup>c</sup>	25 1.09	0 0.00	144 2.36	24 0.68			0.1	253 <sup>e</sup>	27	148	30	1	6.2 2.3
12-4-62 1810	27	51	9.7	87	7.6	2.70 <sup>c</sup>	28 1.22	0 0.00	139 2.28	25 0.71			0.0	242 <sup>e</sup>	31	135	21	2	23.
1-9-63 1410	35	48	11.8	102	7.6 8.0	3.00 <sup>c</sup>	24 1.04	0 0.00	146 2.39	24 0.68			0.0	254 <sup>e</sup>	26	150	30	5	6.2 6.4
2-7-63 1145	275	56	10.3	99	7.4 7.7	2.42 <sup>c</sup>	16 0.70	0 0.00	108 1.74	15 0.42			0.0	200 <sup>e</sup>	22	121	34	15	230. 130.

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of State Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-2  
ANALYSES OF SURFACE WATER  
CENTRAL COASTAL REGION (NO. 3)

Date and time sampled P.S.T.	Discharge Temp in cfs in °F	Dissolved oxygen in %	Specific conductance at 25°C in micromhos/cm	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent total in ppm	Hardness as CaCO <sub>3</sub> Total in ppm	Turbidity in MPN/ml	Analyzed by					
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)						Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents		
SAN LORENZO RIVER AT RIO TRENDS NEAR FELTON (STA. 75)																							
3-6-63 1320	154	48	11.4	99	2.4	357	8.2	2.76	0.78	18	0.70	2.71	0.45	16	0.1	226 <sup>e</sup>	22	138	32	8	2.3	23.	USGS
4-10-63 1025	490	50	10.9	97	7.5	212	0.57	0.92	1.31	0.28	0.10	0.28	0.1	172 <sup>e</sup>	21	106	31	190	620.	620.	620.	620.	620.
5-16-63 1500	145	62	9.6	99	34.5	7.8	8.1	8.3	18	0.08	0.78	0.05	0.1	232 <sup>e</sup>	22	134	29	3	5.	23.	23.	23.	23.
6-4-63 1600	85	64	9.2	97	35.2	8.6	7.8	2.76	0.78	18	0.70	2.71	0.45	16	0.1	223 <sup>e</sup>	22	138	26	5	24.00.	24.00.	24.00.
7-2-63 1300	52	66	9.2	99	364	8.1	2.79	0.78	18	0.70	2.71	0.45	16	0.1	230 <sup>e</sup>	22	140	28	1	62.	62.	62.	
8-6-63 1610	37	68	9.6	106	8.0	8.3	2.87	0.91	21	0.03	2.29	0.36	20	0.0	231 <sup>e</sup>	24	143	26	1	23.	23.	23.	
9-5-63 0830	32	61	9.0	92	375	7.5	2.20	0.64	22	0.00	2.39	0.75	22	0.0	249 <sup>e</sup>	25	142	22	4	62.	62.	62.	
ZAVANTE CREEK AT FELTON (STA. 233)																							
8/29/63 1545	4 (est.)	62	8.1	7.3	394	8.0	0.50	1.04	24	0.00	1.32	0.48	24	0.10	253 <sup>e</sup>	26	142	34	1	10.	10.	10.	
BEAN CREEK ONE MILE EAST OF FELTON (STA. 204)																							
8/30/63 1000	2 (est.)	58	8.0	6.1	383	7.5	0.50	1.04	24	0.00	1.19	0.98	27	0.03	264 <sup>e</sup>	28	132	34	1	10.	10.	10.	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and barium (Ba), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.



# ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (NO. 3)

Date and time sampled P.S.T.	Oscograph Temp. in °F in 10 min	Dissolved oxygen ppm	Specific Conductance at 25°C (micromhos/cm)	Mineral constituents in equivalents per million												Total dissolved solids in ppm	Percent total in ppm	Hardness as CaCO <sub>3</sub> ppm	Turbidity nptm	Analyzed by		
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )							
LOPECO CREEK ONE MILE NORTH OF OLIMPIC (STA. 215)																						
8/20/63 0915	0.5 (est.) 58		604	83 4.16	15 1.23	27 1.17	2.0 0.05	0	303 4.97	48 1.00	20 0.56	0.4 0.01	0.3 0.02	0.11 0.01	32		388.8	18	269	21	0.6	DNR
ZAYANTE CREEK AT ZAYANTE (STA. 234)																						
8/20/63 0853	1 (est.) 59		628	77 3.86	15 1.27	36 1.57	2.6 0.07	0	232 3.80	104 2.16	25 0.70	0.4 0.01	0.5 0.03	0.13 0.01	26		412.8	23	256	66	0.1	DNR
SAN LORENZO RIVER AT FELTON (STA. 229)																						
8/29/63 1335	8 (est.) 66		379	68 2.40	6.3 0.52	20 0.87	2.3 0.06	0	146 2.39	40 0.83	22 0.62	0.7 0.01	0.2 0.01	0.09 0.01	23		236.8	22	146	26	0.9	DNR
FALL CREEK ONE-HALF MILE NORTH OF FELTON (STA. 211)																						
8/29/63 1520	2 (est.) 58		259	61 2.04	3.9 0.32	9.8 0.43	2.2 0.06	0	160 2.29	9.7 0.20	9.8 0.28	0.4 0.01	0.1 0.00	0.02 0.00	23		167.8	15	118	3	0.7	DNR
NEMELL CREEK ONE MILE NORTHEAST OF BEN LORING (STA. 219)																						
8/29/63 1450	52		414	58 2.89	6.7 0.55	17 0.74	2.6 0.07	0	120 1.97	86 1.79	12 0.34	1.2 0.02	0.3 0.02	0.37 0.00	13		276.8	17	172	74	2	DNR

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in gpm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch, (USGS), United States Department of the Interior, Bureau of Reclamation (USBR), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFD), Los Angeles Department of Water and Power (LADWP), City of Los Angeles, Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBDPH), Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

10/2/64-10/2/64

TABLE D-2

## ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (NO. 3)

Date and time sampled P.S.T.	Discharge Temp in cts in of	Dissolved oxygen ppm	Specific Conductance (microhm-cm at 25°C)	Mineral constituents in parts per million												Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub> in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by 1			
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )						Other constituents		
LAKE CREEK AT BEN LOMOND (STA. 216)																							
8/29/63 1330	0.25 (est.) 63		388	7.8 8.0	4.8 2.40	7.5 0.62	21 0.91	1.8 0.05	0	15.2 2.49	38 0.79	23 0.65	0.6 0.01	0.3 0.02	0.10 0.02	23	Color = 10 Fe = 0.05 ABS = 0.0 PO <sub>4</sub> = 0.73	253 <sup>h</sup>	23	151	26	0.7	DNR
CLEAR CREEK AT BROOKDALE (STA. 210)																							
8/29/63 1305	1 (est.) 58		181	7.4 7.7	4.0 0.33	11 0.48	2.2 0.06	0	92 1.51	4.8 0.10	8.8 0.25	0.4 0.01	0.1 0.00	0.04 0.00	23	Color = 5 Fe = 0.01 ABS = 0.0 PO <sub>4</sub> = 0.04	120 <sup>h</sup>	25	69	0	0.3	DNR	
BOULDER CREEK AT BOULDER CREEK (STA. 208)																							
8/29/63 1240	3 (est.) 60		204	7.9 7.9	5.4 1.10	13 0.44	2.1 0.05	0	95 1.56	9.0 0.19	12 0.34	0.8 0.01	0.1 0.00	0.04 0.00	23	Color = 10 Fe = 0.03 ABS = 0.0 PO <sub>4</sub> = 0.16	132 <sup>h</sup>	26	77	0	0.6	DNR	
BEAR CREEK AT BOULDER CREEK (STA. 205)																							
8/29/63 0910	2 (est.) 59		595	8.1 8.2	13 3.54	1.13 1.06	38 1.65	2.2 0.06	0	210 3.44	98 2.04	27 0.76	0.4 0.01	0.4 0.02	0.13 0.02	21	Color = 15 Fe = 0.06 ABS = 0.0 PO <sub>4</sub> = 0.27	383 <sup>h</sup>	26	230	58	0.6	DNR
BEAR CREEK FOUR MILES NORTHEAST OF BOULDER CREEK (STA. 206)																							
8/29/63 1005	2 (est.) 58		634	8.0 8.2	16 3.84	1.16 1.35	33 1.44	2.3 0.06	0	230 3.77	110 2.29	26 0.68	0.5 0.01	0.4 0.02	0.15 0.02	20	Color = 20 Fe = 0.03 ABS = 0.0 PO <sub>4</sub> = 0.25	412 <sup>h</sup>	22	260	71	0.5	DNR

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs. TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWDSC); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Departmental Water Resources (DWR), as indicated.

# ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (NO. 3)

Date and time of sample and PST	Oscilloscope Temp in °C	Dissolved oxygen ppm	Specific conductance at 25°C (μmhos/cm)	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent total sodium in ppm	Hardness as CaCO <sub>3</sub> ppm	Total iron in ppm	Total copper in ppm	Analyzed by		
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)							Barium (Ba)	Silica (SiO <sub>2</sub> )
SAN LORENZO RIVER AT BOULDER CREEK (STA. 224)																					
8/29/62 1855	3 (cont.)	59	650	26.4 8.2	13.1 1.8	42.1 1.8	2.4 0.0	0.0	22.6 3.0	8.1 1.0	5.1 1.4	0.6 0.0	0.4 0.0	0.2 0.0	21.0	4.06 <sup>b</sup>	27	245	65	1	DER
TWO BAR CREEK ONE MILE NORTH OF BOULDER CREEK (STA. 232)																					
8/29/62 1820	0.25 (cont.)	55	579	52.1 7.9	12.4 0.9	48.2 2.0	2.9 0.0	0.0	15.2 2.2	10.0 2.1	3.5 0.9	0.4 0.0	0.4 0.0	0.2 0.0	21.0	3.68 <sup>b</sup>	36	178	49	2	DER
KINGS CREEK TWO MILES NORTH OF BULLHEAD CREEK (STA. 232)																					
8/29/62 1755	1 (cont.)	58	627	26.4 8.1	15.1 1.2	38.1 1.6	2.4 0.0	0.0	21.8 3.5	10.1 2.1	3.1 0.8	1.6 0.0	0.4 0.0	0.2 0.0	21.0	4.07 <sup>b</sup>	25	248	69	1	DER
SAN LORENZO RIVER SIX MILES NORTH OF BOULDER CREEK (STA. 238)																					
8/29/62 1725	3 (cont.)	55	552	86.1 8.1	9.0 0.7	23.1 1.0	1.2 0.0	0.0	25.8 4.2	6.4 1.3	1.4 0.3	1.4 0.0	0.4 0.0	0.2 0.0	24.0	3.57 <sup>b</sup>	16	252	40	1.9	DER
SONOMA CREEK AT SONOMA (STA. 76)																					
10-3-62 1200	1.4	61	11.3	114	6.1	2.31	53	0.0	26.2 4.3	10.1 1.8	6.5 1.8	0.2	0.2	0.2	0.2	6.76 <sup>b</sup>	27	305	89	1	23.1 6.2
11-7-62 1225	9.8	57	1.0	97	8.1	2.52	68	0.0	26.0 4.3	10.1 1.8	6.5 1.8	0.2	0.2	0.2	0.2	5.37 <sup>b</sup>	28	327	120	2	6.2 6.2
12-6-62 171	8.2	55	1.1	95	8.1	2.52	68	0.0	26.0 4.3	10.1 1.8	6.5 1.8	0.2	0.2	0.2	0.2	5.46 <sup>b</sup>	29	324	109	2	6.2 6.2

a. Field pH

b. Laboratory pH

c. Sum of calcium and magnesium in eqm

d. Iron (Fe), aluminum (Al), arsenic (As),

e. Derived from conductivity vs TDS curves

f. Determined by addition of analyzed constituents

g. Gravimetric determination

h. Annual median and range, respectively

i. Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR), San Bernardino County Flood Control District (SBFCFD), Metropolitan Water District of Southern California (MWD), Los Angeles Department of Water and Power (LADWP), City of Los Angeles, Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBPH), Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (CDWR), as indicated

Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBFCFD), Metropolitan Water District of Southern California (MWD), Los Angeles Department of Water and Power (LADWP), City of Los Angeles, Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBPH), Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (CDWR), as indicated

TABLE D-2  
ANALYSES OF SURFACE WATER  
CENTRAL COASTAL REGION (NO. 3)

Date and time sampled P.S.T.	Discharge Temp in °F	Dissolved oxygen in ppm	Specific conductance at 25°C	pH	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub> Total in ppm	Temp. in °F	Coliform MPN/ml	Analyzed by 1	
					parts per million															
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)						Boron (B)
SOQUEL CREEK AT SOQUEL (STA. 76)																				
1-9-63 1245	13	4.9	12.1	105	8.2	6.18 <sup>c</sup>	52	2.26	15	218	53	1.50				502 <sup>e</sup>	27	309	106	6.2
2-7-63 1045	115	58	10.7	104	535	7.8	26	4.44 <sup>c</sup>	0	164	19	0.54			0.1	341 <sup>e</sup>	20	222	88	50
3-6-63 1220	47	52	11.2	101	630	7.8	10	5.21 <sup>c</sup>	4	200	23	0.71			0.1	402 <sup>e</sup>	20	260	89	10
4-10-63 0940	250	50	11.1	98	338	7.7	16	2.96 <sup>c</sup>	0	112	10	0.28			0.1	216 <sup>e</sup>	19	148	56	600
5-16-63 1330	42	70	10.0	111	586	8.4	32	1.33	6	191	111	0.8	0.4	0.1	25	396 <sup>e</sup>	22	246	80	2
6-4-63 1645	24	70	9.1	101	653	8.5	37	5.32 <sup>c</sup>	13	205	31	0.87	0.1			417 <sup>e</sup>	23	266	76	1
7-2-63 1415	15	72	11.3	128	693	8.6	42	5.68 <sup>c</sup>	16	206	42	1.18	0.1			442 <sup>e</sup>	24	284	90	1
8-6-63 1520	7.8	75	8.2	96	748	8.4	50	2.18	9	228	55	1.55	0.1			477 <sup>e</sup>	27	301	100	1
9-5-63 1700	5.6	73	7.8	90	818	8.4	52	2.26	10	232	99	0.62	0.4	0.2	33	509 <sup>e</sup>	27	295	88	3
PALARO RIVER NEAR CHITTENDEN (STA. 77)																				
10-1-62 1700	0.5	67	8.0	86	2,060	8.0	288	9.58 <sup>c</sup>	0	584	375	10.58	0.1			1,288 <sup>e</sup>	57	479	0	15
11-5-62 1725	1.0	59	7.6	75	1,830	8.3	258	8.32 <sup>c</sup>	12	520	289	8.13	1.6			1,144 <sup>e</sup>	57	416	0	2
12-3-62 1245	0.7	55	9.1	86	2,060	8.4	286	9.50 <sup>c</sup>	12	578	332	9.37	1.8			1,288 <sup>e</sup>	57	475	0	1

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

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# ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (NO. 3)

Date and time of day and P.S.T.	Discharge Temp in cfs in op.	Dissolved oxygen in ppm	Specific conductance at 25°C µmhos/cm	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent lead- in ppm	Hardness as CaCO <sub>3</sub> Total N.C. ppm	Tur- bid- ity in ppm	Analyzed by				
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)						Bromine (Br)	Silica (SiO <sub>2</sub> )	Other constituents	
PALJARO RIVER NEAR CHITTENDEN (STA. 77)																						
1-7-63 1710	1.5	4.7	9.0	76	2,030	8.0	8.0	268	11.46	0.40	8.98	12	548	338	9.53	1.9	1,269	55	480	11	2	23.
2-5-63 1465	1,200	60	8.2	82	262	7.4	7.4	15	2.02	0.00	1.74	0	106	12	0.34	0.0	1,638	24	102	15	240	7,000.
3-4-63 1600	46	59	9.6	95	591	7.5	7.5	34	6.62	0.00	3.24	0	204	33	0.93	0.3	369	24	232	65	25	230.
4-8-63 1610	1,100	60	8.6	86	334	7.5	7.5	18	2.83	0.00	1.52	0	142	13	0.37	0.2	209	22	142	26	200	230.
5-15-63 0900	57	62	8.8	90	847	7.6	7.6	42	5.4	2.2	3.48	13	249	48	1.35	0.3	519	25	341	115	60	23.
6-5-63 1330	29	68	8.5	93	1,280	8.4	8.4	100	4.35	0.06	5.77	12	352	94	2.65	0.7	800	30	500	192	20	21.
7-1-63 1815	14	70	7.6	85	1,500	8.4	8.4	122	5.31	0.27	6.69	8	408	112	3.16	0.8	938	34	520	172	9	130.
8-5-63 1350	8.0	69	9.1	100	1,510	8.4	8.4	162	6.18	0.73	7.28	7	505	125	3.53	0.8	944	38	512	86	5	62.
9-3-63 1315	3.0	68	9.1	99	1,440	8.4	8.4	72	6.57	5.6	8.90	4	543	165	3.67	0.9	894	40	479	28	9	5.
SAN BENITO RIVER NEAR BEAR VALLEY FIRE STATION (STA. 77a)																						
10-2-62 1005	0.2	63	9.2	98	2,120	8.2	8.2	274	11.92	0.00	9.08	0	554	260	7.33	1.7	1,361	48	647	193	5	2.3
11-6-62 0915	0.1	56	10.9	107	2,180	8.4	8.4	210	11.74	0.60	9.24	18	564	186	5.25	2.0	1,413	46	682	190	2	0.62
12-3-62 1415	1.0	65	12.0	131	1,860	8.7	8.7	224	9.74	1.37	7.90	15	482	143	4.03	1.6	1,205	45	600	146	1	6.2

a. Field pH

b. Laboratory pH

c. Sum of calcium and magnesium in ppm

d. Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e. Derived from conductivity vs TDS curves

f. Determined by addition of analyzed constituents

g. Gravimetric determination

h. Annual median and range, respectively

i. Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated

TABLE D-2

## ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (NO. 3)

Date and time sampled	Oxidation Temp in °C	Dissolved oxygen, ppm	%SO <sub>4</sub>	Specific conductance at 25°C $\frac{\mu}{\text{cm}}$	Mineral constituents in equivalents per million										gorts per million		Total dissolved solid in ppm	Per- cent sediment as CaCO <sub>3</sub> Total NC ppm	Tot. biog- enically produced MPN/ml	Analyzed by I	
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sum (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)	Boron (B)	Silico (SiO <sub>2</sub> )					Other constituents
SAN BENITO RIVER NEAR BEAR VALLEY FIRE STATION (STA. 77a)																					
1-8-63 1030	0.6	4.9	12.4	112	8.4	12.36	8.70	200.	2.7	530.	16.9	4.20		1.6	1,199 <sup>e</sup>	41	618	14.7	2	23.	USGS
2-5-63	5.0	64	9.2	99	8.2	132	132	132	0.73	498	85	2.40		1.4	927 <sup>f</sup>	35	526	80	4.0	62	
3-5-63	4.0	58	11.6	117	8.4	166	166	166	1.33	501	104	2.93		1.5	1,076 <sup>g</sup>	38	596	119	2	0.23	
4-9-63	6.0	55	10.8	105	8.4	153	153	153	1.27	502	94	2.65		1.3	998 <sup>h</sup>	36	602	126	10	23.	
5-15-63	3.2	67	8.8	98	8.4	68	3.9	2.7	12	396	72	1.86	0.3	0.4	442 <sup>i</sup>	19	358	14	50	13.	
6-5-63	107	72	8.9	105	8.1	8.16	41	1.50	6.42	392	22	0.62		0.6	527 <sup>j</sup>	18	408	11	4.0	5.	USGS
7-1-63	0.4	71	8.8	102	8.4	186	186	186	1.17	425	118	3.33		1.7	1,128 <sup>k</sup>	42	566	117	1	13.	
8-6-63	0.2	77	12.7	157	8.1	248	248	248	0.80	468	162	4.57		2.2	1,290 <sup>l</sup>	48	596	156	1	620.	
9-4-63	0.1	69	12.1	138	8.3	120	248	4.1	15	513	462	163	0.4	2.1	1,310 <sup>m</sup>	47	598	153	1	62.	
1315						9.86	10.79	0.10	0.50	8.41	9.62	4.60	0.03	0.02							
TAS CREEK NEAR MORGAN HILL (STA. 95)																					
10-1-62 1540	3 (est.)	80	11.2	140	8.2	12	12	4.	0.13	192	8.8	0.25		0.0	216 <sup>n</sup>	13	174	10	1	5.	USGS
11-5-62	125 (est.)	59	9.2	92	7.3	7.0	0.30	0.00	0.00	101	5.2	0.15		0.1	126 <sup>o</sup>	13	97	14	20	62.	
12-3-62	15 (est.)	55	11.2	106	7.6	8.7	0.36	0.00	0.00	169	6.5	0.18		0.0	173 <sup>p</sup>	1	131	9	30	2.3	
						2.62	0.36	0.00	0.00	244	0.18									2.3	

Field 04

Laboratory of

Sum of calcium and magnesium in ppm

Sum of calcium and magnesium in ppm

Iron (Fe), aluminum (Al), arsenic (As), col-

Derived from conductivity vs TDS curves

Determined by addition of

### 9 Gravimetric determination

Annual median and range, respectively Calculate

Date and time sampled P.S.T.	Onset Temp in cts. of	Dissolved oxygen ppm	Specific conductance (microhms at 25°C)	pH a. b.	Mineral constituents in ————— parts per million												Total dissolved solids in ppm	Percent solid in ppm	Hardness as CaCO <sub>3</sub> ppm	Turbidity NTU	Analyzed by			
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )						Other constituents		
1-7-63 1000	1 (est.) 54	16.5	154	8.2 8.3	3.26 <sup>c</sup>	11 0.48			15 0.47	158 2.59			7.2 0.20		0.1		207 <sup>e</sup>	13	163	10	2	2.3	USGS	
2-5-63	300(est.) 58	10.3	101	7.5 7.7	1.52 <sup>c</sup>	6.0 0.26			0.00	90 1.48			3.8 0.11		0.0		107 <sup>e</sup>	15	76	2	90	23.0		
3-4-63 1500	10(est.) 58	10.8	106	7.6 8.0	1.84 <sup>c</sup>	5.9 0.26			0.00	107 1.75			6.0 0.11		0.0		126 <sup>e</sup>	12	92	4	60	6.2		1.3
4-8-63 1520	500(est.) 59	9.7	97	7.2 7.8	2.06 <sup>c</sup>	6.2 0.27			0.00	118 1.93			5.8 0.16		0.0		137 <sup>e</sup>	12	103	6	15	6.2		6.2
5-14-63 1600	8 (est.) 70	11.1	125	8.3 8.5	1.75	11 0.37	1.2 0.03	6 0.20	138 2.26	18 0.37	5.5 0.03	1.6 0.01	0.2 0.0	0.0 19			166 <sup>e</sup>	12	128	5	2	0.62		0.62
6-5-63	5 (est.) 70	10.3	119	8 8.6	2.93 <sup>c</sup>	9.0 0.39		8 0.27	132 2.49		6.1 0.17			0.1			187 <sup>e</sup>	12	146	8	5	2.3	6.2	
7-1-63 1730	10 (est.) 63	11.0	115	8.1 8.5	2.97 <sup>c</sup>	8.5 0.37		6 0.20	165 2.38		6.0 0.17			0.0			178 <sup>e</sup>	11	148	20	1	23.0	2.3	
8-5-63 1300	30 (est.) 74	9.6	113	8.0 7.8	3.04 <sup>c</sup>	10 0.44		0 0.00	178 2.92		5.2 0.15			0.2			203 <sup>e</sup>	13	152	6	5	23.0	23.0	
9-5-63 1200	25 (est.) 74	8.7	102	7.7 8.2	1.85	17 0.48	1.3 0.03	0 0.00	184 3.02	25 0.52	6.0 0.17	2.5 0.04	0.3 0.02	0.2 23			216 <sup>e</sup>	13	162	11	15	6.2	6.2	
CARLTON CREEK AT OLD STAGE ROAD NEAR SALINAS (STA. 212)																								
2-1-63 1430	61		359	7.8	2.00	8.8 0.72	3.5 0.09	0 0.00	130 2.13	30 0.62	26 0.73	7.5 0.12	0.2 0.01	0.0 21			235 <sup>e</sup>	23	136	29	90		USGS	

UVA'S CREEK NEAR MORGAN HILL (STA. 96)

GABRIEL CREEK AT OLD STAGE ROAD NEAR SALINAS (STA. 212)

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.  
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Filling Laboratories, Inc. (TFL) for California Department of Water Resources (DWR); as indicated



TABLE D-2

CENTRAL COASTAL REGION (NO. 3)

Date and time sampled P.S.T.	Discharge Temp in cfs	Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million												Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub> Total N.C. ppm	Turbidity - Latiform MPN/ml	Analyzed by I			
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )					Other constituents		
NATIVIDAD CREEK AT OLD STAGE ROAD NEAR SALINAS (STA. 218)																						
2-11-63 1030	64.5	663	7.7	69	36	25	8.9	0	410	27	6.0	2.0	0.4	0.2	24	432 <sup>8</sup>	14	320	0	2	USGS	
ALISAL CREEK AT OLD STAGE ROAD NEAR SALINAS (STA. 200)																						
2-6-63 1000	60	821	8.5	79	26	58	2.2	12	262	56	89	8.4	0.7	0.0	28	506 <sup>8</sup>	29	304	69	3	USGS	
TORO CREEK AT HIGHWAY 117 BRIDGE NEAR SALINAS (STA. 237)																						
2-4-63 1600	62	1,330	8.5	88	29	138	6.2	10	296	113	220	2.1	0.4	0.1	72	831 <sup>8</sup>	47	339	137	2	USGS	
SALINAS RIVER NEAR SPECKELS (STA. 43)																						
10-3-62 1040	0.6	1,110	7.3	4.63	4.63	6.09	0	0	302	150	4.23	0.2	0.2	0.2	0	673 <sup>e</sup>	57	232	0	20	7,000 +	USGS
11-7-62 1050	3.0	1,330	7.4	10.16	135	5.87	0	0	700	35	0.99	0.2	0.2	0.2	0	927 <sup>e</sup>	37	508	0	5	230	62
12-4-62 1330	5.0	1,500	7.4	9.93	123	5.26	0	0	675	143	4.03	0.3	0.3	0.3	0	909 <sup>e</sup>	35	496	0	2	230	230
1-9-63 1130	5.0	1,600	7.5	11.40	120	5.22	0	0	770	146	4.12	0.1	0.1	0.1	0	970 <sup>e</sup>	31	570	0	5	130	23
2-6-63 1700	1,280	62	8.1	3.06	20	0.97	0	0	142	15	0.42	0.0	0.0	0.0	0	236 <sup>e</sup>	22	153	37	60	230	230
3-6-63 2020	210	51	100	5.16	38	1.65	13	204	33	0.93	0.2	0.2	0.2	0.2	0	394 <sup>e</sup>	21	258	69	50	23	23

Mr. P. J. J.

Field pH

Lactate

6 Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), or arsenic (As),

e Derived from conductivity vs IDS curve

f Determined by addition of analyzed con

### 9 Gravimetric determination

h Annual median and range, respectively.

i Mineral analyses made by United States

Control District (SBCFCD); Metropolitan

Public Health (LBDPH); Terminal Test

# ANALYSES OF SURFACE WATER

## CENTRAL COASTAL REGION (NO. 3)

Date and time sampled P.S.T.	Outcrops in cfs	Dissolved oxygen ppm	Specific Conductance at 25°C (microhm-cm)	Mineral constituents in equivalents per million												Total dissolved solids in ppm	Per cent solid in ppm	Hardness as CaCO <sub>3</sub> ppm	Turbidity in ppm	Analyzed by		
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )						Other constituents	
SALINAS RIVER NEAR STRECKEIS (STA. 43)																						
4-9-63 1720	540	63	9.5	98	7.9 8.3	26 4.10 <sup>c</sup>	1.13	6 0.20	165 2.70	21 0.59	0.1	0.1	0.1	23	As = 0.00 ABS = 0.0 PO <sub>4</sub> = 0.00	229 <sup>f</sup>	22	205	61	50	62	USGS
5-16-63 1200	120	73	12.1	139	8.4 8.6	27 3.84	23 1.91	3.0 0.08	216 0.47	38 1.07	0.4 0.02	0.4	0.1	23	As = 0.00 ABS = 0.0 PO <sub>4</sub> = 0.00	460 <sup>8</sup>	25	288	88	10	62	
6-4-63 1630	3.5	70	18.9	210	8.2 8.5	114 4.96	5.91 <sup>c</sup>	12 0.40	308 5.05	126 3.55	0.4	0.4	0.1	23	As = 0.00 ABS = 0.0 PO <sub>4</sub> = 0.00	661 <sup>e</sup>	46	296	24	15	230	
7-2-63 1330	2.0	78	18.1	218	8.1 8.0	144 5.93 <sup>c</sup>	6.26	0 0.40	227 3.64	138 3.61	0.6	0.6	0.1	23	As = 0.00 ABS = 0.0 PO <sub>4</sub> = 0.00	806 <sup>d</sup>	56	296	114	15	2400	
8-6-63 1315	1.4	77	16.0	191	8.0 7.6	139 7.12 <sup>c</sup>	6.05	0 0.00	450 7.38	144 4.06	0.4	0.4	0.1	23	As = 0.00 ABS = 0.0 PO <sub>4</sub> = 0.00	818 <sup>e</sup>	46	356	0	6	2,400	
9-5-63 1415	3.3	74	9.5	110	7.2 8.0	107 5.34	3.90	35 0.89	453 9.80	162 4.15	0.5 0.02	0.5	0.1	40	As = 0.00 ABS = 1.5 PO <sub>4</sub> = 1.3	894 <sup>8</sup>	36	462	0	40	620	
SALINAS RIVER AT HILLTOP BRIDGE NEAR STRECKEIS (STA. 222)																						
2-4-63 1530	60				296 7.5	8.8 1.60	0.72	0 0.00	109 1.79	46 0.83	0.1 0.01	0.1	0.0	22	As = 0.00 ABS = 0.0 PO <sub>4</sub> = 0.00	188 <sup>8</sup>	19	116	27	100		USGS
SALINAS RIVER AT CHUALAR BRIDGE NEAR CHUALAR (STA. 221)																						
2-4-63 1430	61.5				304 8.4	9.5 1.60	0.78	0 0.00	105 1.72	46 0.96	0.1 0.01	0.1	0.1	29	As = 0.00 ABS = 0.0 PO <sub>4</sub> = 0.00	200 <sup>8</sup>	21	119	28	110		USGS

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

3205-0-4d (Rev. 2-60)

TABLE D-2

[illegible]

a Field pH  
b Laboratory pH  
c Sum of calcium and magnesium in eqm.  
d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium ( $\text{Cr}^{+6}$ ), reported here as 0.0 except as shown.  
e Derived from conductivity vs TDS curves  
f Determined by addition of analyzed constituents  
g Gravimetric determination  
h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratory  
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR), and  
j Public Health (SBPDC), Metropolitan Water District of Southern California (MWD), Los Angeles Department of Water and Power (LADWP), City of Los Angeles, California Department of Water Resources (DWR), Inc. (ITLL), or California Department of Water Resources (DWR), as indicated.



TABLE D-2

## ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (NO. 3)

Date and time sampled P.S.T.	Discharge Temp in cfs in °F	Dissolved oxygen ppm %Sat	Specific conductance at 25°C µmhos/cm	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per cent total dissolved solids	Hardness as CaCO <sub>3</sub> Total N.C. ppm	Temp - hardness in ppm	Analyzed by					
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)						Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents		
SAN ANTONIO RIVER NEAR FLEETO (STA. 434)																							
10-2-62 1315	Dry																						
11-6-62 1230	Ponded																						
12-3-62 1645	0.3	61	9.6	99	488	8.2	7.5	0	204	0.00	3.76	19	0.54	0.0			316 <sup>e</sup>	24	201	34	2	2.3	6.2
1-8-63 1330	8.9	55	10.5	100	466	8.2	8.0	0	194	0.00	3.18	16	0.45	0.0			302 <sup>e</sup>	18	202	43	3	0.62	23.
2-6-63 1200	300	59	9.9	94	332	8.1	7.7	0	164	0.00	2.36	7.5	2.21	0.1			215 <sup>e</sup>	15	148	30	5	62.	62.
3-5-63 1430	122	61	9.6	99	385	8.4	8.0	5	158	0.17	2.59	7.8	0.22	0.0			249 <sup>e</sup>	14	169	31	4	0.62	0.62
4-9-63 1250	200	62	9.4	98	340	8.1	7.8	0	148	0.00	2.43	6.0	0.17	0.1			220 <sup>e</sup>	13	156	35	10	6.2	6.2
5-15-63 1415	105	78	8.0	98	379	8.3	8.0	4	160	0.13	2.62	55	1.15	0.0	28		261 <sup>e</sup>	16	170	32	6	6.2	6.2
6-4-63 1100	50	75	7.8	93	404	8.6	8.4	10	160	0.33	2.62	8.8	0.25	0.0			261 <sup>e</sup>	15	186	38	5	2.3	2.3
7-2-63 2200	16	65	8.2	88	427	8.4	8.2	6	168	0.21	2.75	10	0.28	0.0			276 <sup>e</sup>	16	190	42	1	6.2	6.2
8-6-63 0920	Ponded																						
9-4-63 0945	Dry																						
USGS																							

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>VI</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBFCFD), Metropolitan Water District of California (MWD), Los Angeles Department of Water and Power (LADWP), City of Los Angeles, Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBPH), Terminal Testing Laboratories, Inc. (TTL) or California Department of Water Resources (DWR), as indicated.

Date and time sampled P.S.T.	Discharge in cfs	Temp. in °F	Dissolved oxygen in % sat	Specific Conductance at 25°C in microhm/cm	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent calcium as CaCO <sub>3</sub> Total N.C. ppm	Total hardness as CaCO <sub>3</sub> ppm	Temp. in °F	Conform to MPN/ml	Analyzed by 1
					parts per million															
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)						
NACIMIENTO RIVER NEAR SAN MIGUEL (STA. 43b)																				
10-2-62	500 (est.)	67	13.4	167	8.2	2.21 <sup>e</sup>	8.1	0	123	0	6.4	0.18	0.2	138 <sup>e</sup>	14	110	9	15	62.	USGS
11-6-62	255	65	10.4	112	7.9	2.32 <sup>e</sup>	8.6	0	132	0	5.8	0.16	0.0	158 <sup>e</sup>	14	116	8	3	23.	
12-3-62	200 (est.)	60	9.8	100	8.0	2.40 <sup>e</sup>	9.4	0	130	0	6.9	0.19	0.0	164 <sup>e</sup>	15	120	13	2	23.	
1-8-63	4 (est.)	54	8.7	82	7.4	3.15 <sup>e</sup>	12	3	117	0	11	0.31	0.0	211 <sup>e</sup>	14	157	6	5	13.	
2-6-63	1255	62	9.9	103	7.8	3.16 <sup>e</sup>	11	0	114	0	8.2	0.23	0.1	209 <sup>e</sup>	13	158	15	7	62.	
3-5-63	2 (est.)	64	10.8	115	8.1	3.32 <sup>e</sup>	11	0	182	0	8.8	0.25	0.1	220 <sup>e</sup>	13	166	17	6	0.21	
4-9-63	No flow																		0.42	
5-15-63	Ponded																			
6-4-63	Ponded																			
7-2-63	500 (est.)	58	11.1	110	8.2	2.32 <sup>e</sup>	7.9	0	120	0	6.0	0.17	0.0	156 <sup>e</sup>	13	116	18	5	23.	
8-6-63	500 (est.)	55	11.1	106	8.0	2.32 <sup>e</sup>	7.8	0	123	0	6.0	0.17	0.1	157 <sup>e</sup>	13	116	15	5	62.	
9-4-63	500 (est.)	54	9.8	92.5	7.9	2.6	7.8	2.0	122	0	5.8	0.16	0.2	157 <sup>e</sup>	13	116	16	4	2.1	
0815					7.9	1.30	0.34	0.05	2.00	0.00	0.44	0.02	0.01						23.	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in gpm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2

## ANALYSES OF SURFACE WATER

CALIFORNIA DEPARTMENT OF WATER RESOURCES

Date and time of day P.S.T.	Discharge Temp in cts in °F	Dissolved oxygen ppm	Specific conductance (micro-mhos at 25°C)	pH	Mineral constituents in equivalents per million												Total dis- solved solids in ppm	Pre- cipi- tated solids in ppm	Hardness as CaCO <sub>3</sub> Total N.C. ppm	Tur- bidity in fpm	Conform- ity MPN/ml	Analyzed by	
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)	Boron (B)	Silica (SiO <sub>2</sub> )							Other constituents
2-4-63 1300	66		148	8.1	15 0.70	6.6 0.34	5.2 0.23	2.0 0.05	0 0.00	62 1.02	15 0.31	3.8 0.11	4.1 0.07	0.0 0.00	0.0 0.0	11	101 <sup>8</sup>	15	62	11	35	USGS	
SACRAMENTO LAKE AT DAM NEAR SAN MIGUEL (STA. 247)																							
10-2-62 1530	try																						
11-4-62 1630	try																						
12-4-62 0900	try																						
1-8-63 1500	try																						
SALINAS RIVER AT PASO ROBLES (STA. 43a)																							
2-6-63 1350	33	62	9.2	96	7.7 5.38	28 1.22	28 1.13	1.7 0.04	0 0.00	236 3.87	15 0.31	3.8 0.11	4.1 0.07	0.0 0.00	0.0 0.0	11	412 <sup>8</sup>	18	279	85	4	620, 23.	
3-5-63 1620	38	63	10.4	109	8.1 6.74	61 2.78	61 2.78	1.7 0.04	12 0.40	258 4.23	15 0.31	3.8 0.11	4.1 0.07	0.0 0.00	0.0 0.0	11	514 <sup>6</sup>	21	338	107	1	23, 62.	
4-9-63 1435	130	66	8.9	97	7.9 5.96	26 1.13	26 1.13	1.7 0.04	0 0.00	246 4.03	15 0.31	3.8 0.11	4.1 0.07	0.0 0.00	0.0 0.0	11	400 <sup>6</sup>	17	274	72	25	23, 230,	
5-15-63 1615	65	82	8.6	110	8.1 6.74	28 1.22	28 1.13	1.7 0.04	0 0.00	238 4.23	11.6 2.22	29 0.87	1.0 0.02	0.2 0.01	0.0 0.0	20	P <sub>04</sub> = 0.25	454 <sup>6</sup>	18	320	92	2	190, 5.
6-4-63 1300	15	80	8.7	109	8.1 6.74	28 1.22	28 1.13	1.7 0.04	12 0.40	287 4.70	49 1.38	49 1.38	0.1			0.1	571 <sup>6</sup>	23	370	114	3	620, 2,400.	
7-2-63 2030	try																						
8-6-63 0730	try																						
9-4-63 0730	try																						

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown

e Derived from conductivity vs. TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFD), Metropolitan Water District of Southern California (MWD), City of Los Angeles, Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBPH), Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.



Date and time sampled P.S.T.	Discharge Temp in °F's	Dissolved oxygen in % ppm	Specific conductance (microhm-cm at 25 °C) µmhos	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent as CaCO <sub>3</sub> Total	Hardness on CaCO <sub>3</sub> Total ppm	Turbid- ity MPN/ml 1/2 MCM/m	Analyzed by			
				Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)						Boron Silico (B) (SiO <sub>2</sub> )	Other constituents	
CARBELL RIVER AT ROULETS OIL RID (STA. 83)																					
10-3-62 0900	TV																				
11-7-62 0940	2.8	5/ 10.8	105	7.4 8.1	3.26 3.26	33 1.44	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	280 <sup>c</sup>	31	16.3	37	1	71. 6.2
12-4-62 1440	4.8	56 11.8	113	7.8 8.2	3.8 3.8	61 1.78	0 1.73	0 1.73	0 1.73	0 1.73	0 1.73	0 1.73	0 1.73	0 1.73	0 1.73	333 <sup>c</sup>	32	190	48	1	21. 62.
1-9-63 1040	7.0	50 11.1	99	7.4 8.0	2.4 2.4	28 1.22	0 1.66	0 1.66	0 1.66	0 1.66	0 1.66	0 1.66	0 1.66	0 1.66	0 1.66	255 <sup>c</sup>	29	168	78	1	2.4 0.62
2-7-63 0855	2.30	55 10.4	99	7.4 7.6	2.4 2.4	9.4 1.32	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	114 <sup>c</sup>	24	68	4	2	13. 62.
3-6-63 1015	95	52 11.2	102	7.6 8.1	1.84 1.84	12 0.52	0 1.02	0 1.02	0 1.02	0 1.02	0 1.02	0 1.02	0 1.02	0 1.02	0 1.02	147 <sup>c</sup>	27	92	8	3	1.3 6.2
4-8-63 1810	260	54 10.4	97	7.5 8.1	1.76 1.76	10 0.44	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	133 <sup>b</sup>	21	85	5	1	23. 5.
5-16-63 1100	132	62 10.0	103	7.8 8.0	2.4 2.4	13 0.66	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	158 <sup>c</sup>	23	93	6	2	0.62 2.1
6-4-63 1600	100	60 8.8	89	8.0 8.2	1.94 1.94	11 0.48	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	139 <sup>c</sup>	20	97	7	5	23. 23.
7-2-63 1610	23	70 10.5	119	8.2 8.2	2.28 2.28	16 0.60	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	182 <sup>c</sup>	23	114	11	1	6.2 2.3
8-6-63 1345	0.7	74 10.6	125	8.1 8.4	2.3 2.68	23 1.05	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	0 1.04	221 <sup>c</sup>	27	134	22	1	21. 23.
8-14-63 1515	TV																				

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.6 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Mineral analyses made by United States Geological Survey, Quality Control Branch, (USGS), United States Department of the Interior, Bureau of Reclamation (USBR), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFD), San Bernardino County Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBPH), Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

AL A. AI 3

ANALYSES OF SURFACE WATER

AL A. AI 3

TABLE D-2

## ANALYSES OF SURFACE WATER

SOUTH BAY AQUEDUCT

Date and time of sample collection P.S.T.	Water Elevation (feet)	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhm-cm at 25°C)	pH	Mineral constituents in parts per million												Total dissolved solids in ppm	Particulate matter in ppm	Hardness as CaCO <sub>3</sub> Total in ppm	Turbidity in NTU	Coliform MPN/ml	Analyzed by
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )						
BETHANY FOREBAY AT SOUTH BAY PUMPING PLANT (STA. 207)																							
10-8-62 2020				588	7.9	28	14	64	3.1	0	115	41	95	2.0	0.2	0.23	16						
						1.40	1.18	2.78	0.08	0.00	1.86	0.85	2.68	0.03	0.01								
11-1-62 1550	237.5			710	7.9	33	17	81	3.5	0	125	57	119	2.0	0.2	0.30	19						
						1.65	1.43	3.52	0.09	0.00	2.05	1.19	3.36	0.03	0.01								
11-19-62 1300	237.7			797	8.0	35	20	94	3.6	0	134		134			0.38							
						1.75	1.65	4.09	0.09	0.00	2.20		3.78										
12-9-62 1915	239.13			788	7.8	38	18	89	3.6	0	133	67	130	3.5	0.3	0.37	20						
						1.90	1.46	3.87	0.09	0.00	2.18	1.39	3.67	0.06	0.02								
12-24-62 1350	237.42			787		38	18	92	3.6			68	133			0.41							
						1.90	1.50	4.00	0.09			1.42	3.75			0.01							
1-7-63 0910	237.31			789	8.1	35	20	96	5.0	0	137	68	132	2.6	0.3	0.40	19						
						1.75	1.63	4.18	0.13	0.00	2.24	1.42	3.72	0.04	0.02								
1-21-63 1255	230.30			835	7.8	42	17	98	3.5	0	136	82	139	2.2	0.1	0.46	18						
						2.10	1.40	4.26	0.09	0.00	2.23	1.71	3.92	0.04	0.00								
2-4-63 0930	238.66			852	7.9	40	20	98	3.3	0	137	89	136	3.3	0.2	0.48	18						
						2.00	1.62	4.26	0.08	0.00	2.24	1.85	3.84	0.05	0.01								
2-18-63 1350	238.12			849	8.1	39	20	106	3.5	0	137	89	140	4.2	0.4	0.49	18						
						1.95	1.69	4.52	0.09	0.00	2.24	1.85	3.95	0.07	0.02								
3-1-63 1315	238.51			805	7.8	32	20	99	3.2	0	120	89	133	0.8	0.1	0.48	17						
						1.60	1.62	4.31	0.08	0.00	1.97	1.85	3.75	0.01	0.00								
3-18-63 1420	238.84			720	7.7	32	18	82	3.0	0	116	83	110	0.9	0.1	0.46	15						
						1.60	1.46	3.57	0.08	0.00	1.90	1.73	3.10	0.01	0.00								
4-1-63 1125				773	7.8	33	20	88	3.0	0	111	88	119	2.2	0.2	0.44	17						
						1.65	1.61	3.83	0.08	0.00	1.82	1.83	3.36	0.04	0.01								
4-15-63 1315				755	8.0	35	18	80	3.4	0	112	88	116	2.1	0.2	0.44	16						
						1.75	1.45	3.48	0.09	0.00	1.84	1.83	3.21	0.03	0.01								
4-28-63 1835	235.9			763	8.0	35	19	84	3.0	0	116	92	116	3.4	0.2	0.52	15						
						1.75	1.53	3.65	0.08	0.00	1.90	1.92	3.27	0.05	0.01								
a Field pH																							
b Laboratory pH																							
c Sum of calcium and magnesium in ppm																							
d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr <sup>6+</sup> ), reported here as 0.0 except as shown.																							
e Derived from conductivity vs TDS curves																							
f Determined by addition of analyzed constituents																							
g Gravimetric determination																							
h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.																							
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.																							
j As=0.78 Mn=0.00 Al=0.00 Zn=0.01 Cu=0.00 Se=0.000 Pb=0.00 Fe=1.4																							
k ABS=0.00																							
l ABS=0.0																							
m ABS=0.0																							
n ABS=0.03 Cu=0.00 Zn=0.01																							

## ANALYSES OF SURFACE WATER

SOUTH BAY AQUEDUCT

Date and time sampled P.S.T.	Water elevation (feet)	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmals at 25°C)	pH	Mineral constituents in parts per million										Total dissolved in ppm	Hardness as CaCO <sub>3</sub> ppm	Turbidity MPN/ml	Analyzed by
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents	
BETANY FORELAY AT SOUTH BAY PUMPING PLANT (STA. 207)																			
5-13-63 1300	233.53			787	7.9	38 1.90	18 1.46	82 3.57	3.0 0.08	0	120 1.97	90 1.87	119 3.36	0.2 0.00	0.3 0.02	0.49	16	ABS=0.01 Cu=0.00 Zn=0.00	
5-27-63 1230	237.95			593	8.0	27 1.35	14 1.17	64 2.78	2.5 0.06	0	96 1.57	68 1.42	87 2.45	0.4 0.01	0.2 0.01	0.39	15	ABS=0.01 Cu=0.00 Zn=0.00	
6-10-63 1300	237.5			314	7.4	17 0.85	6.9 0.57	30 1.30	1.6 0.04	0	58 0.95	29 0.60	42 1.18	0.2 0.00	0.1 0.00	0.19	15	ABS=0.01 Cu=0.00 Zn=0.00	
6-24-63 1105	238.12			280	7.7	15 0.75	6.9 0.57	25 1.09	1.8 0.05	0	57 0.93	25 0.57	37 1.04	0.6 0.01	0.1 0.00	0.17	13	ABS=0.00 Cu=0.00 Zn=0.00	
7-8-63 1050	237.3			307	7.4	18 0.90	7.3 0.60	26 1.13	1.8 0.05	0	63 1.03	27 0.56	61 1.16	0.6 0.01	0.2 0.01	0.14	14	ABS=0.00 Cu=0.00 Zn=0.00	
7-23-63	235.1			344	7.9	19 0.95	8.6 0.71	36 1.57	1.9 0.05	0	73 1.20	30 0.62	48 1.35	1.0 0.02	0.2 0.01	0.16	14	Cu=0.00 Zn=0.00	
8-5-63 1400	236.1			334	9.4	18 0.90	9.5 0.78	32 1.39	2.0 0.05	21 0.70	39 0.64	27 0.56	43 1.21	0.1 0.00	0.2 0.01	0.14	2.4	Cu=0.00 Zn=0.00	
8-19-63 1230	234.7			364	7.1	19 0.95	10 0.87	34 1.48	1.7 0.04	0	86 1.41	26 0.54	46 1.30	1.1 0.02	0.1 0.00	0.16	17	Cu=0.00 Zn=0.00	
9-3-63 1715	236.3			812	6.3	17 0.85	20 1.35	47 2.04	1.7 0.43	0	303 4.97	37 1.75	62 1.75	0.4 0.01	0.1 0.00	0.1	19	Cu=0.00 Zn=0.06	
9-30-63 1300	236.4			593	7.7	31 1.55	14 1.17	63 2.74	3.2 0.08	0	138 2.10	42 0.87	90 2.54	1.63 0.02	0.23	19	Cu=0.02		

o Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

4 1--- (E-) aluminum (Al) arsenic (As), con-

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), and lead (Pb) concentrations were determined by inductively coupled plasma atomic emission spectroscopy (ICP-AES) (PerkinElmer AAS-9000). Total dissolved iron (Fe<sub>T</sub>) was determined by inductively coupled plasma atomic emission spectroscopy (ICP-AES) (PerkinElmer AAS-9000) after digestion of the sample with concentrated nitric acid (HNO<sub>3</sub>) and hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>). Total dissolved aluminum (Al<sub>T</sub>) was determined by inductively coupled plasma atomic emission spectroscopy (ICP-AES) (PerkinElmer AAS-9000) after digestion of the sample with concentrated nitric acid (HNO<sub>3</sub>) and hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>). Total dissolved arsenic (As<sub>T</sub>) was determined by inductively coupled plasma atomic emission spectroscopy (ICP-AES) (PerkinElmer AAS-9000) after digestion of the sample with concentrated nitric acid (HNO<sub>3</sub>) and hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>). Total dissolved copper (Cu<sub>T</sub>) was determined by inductively coupled plasma atomic emission spectroscopy (ICP-AES) (PerkinElmer AAS-9000) after digestion of the sample with concentrated nitric acid (HNO<sub>3</sub>) and hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>). Total dissolved lead (Pb<sub>T</sub>) was determined by inductively coupled plasma atomic emission spectroscopy (ICP-AES) (PerkinElmer AAS-9000) after digestion of the sample with concentrated nitric acid (HNO<sub>3</sub>) and hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>).

e Derived from conductivity vs. US curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

<sup>h</sup> Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

<sup>a</sup> All mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS) ; San Bernardino County Flood Control District (SBFCFCD).

mineral analysis was made by United States Geological Survey (USGS).  
 (LADWP): City of Los Angeles, Department of Water and Power (LADWP); City of Long Beach, Department of  
 Control District (SBCECD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Public Health (LADPH); City of Long Beach, Department of

Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE D-2

## ANALYSES OF SURFACE WATER

SOUTH MAY AQUEDUCT

Date and time sampled P.S.T.	Water Temp Elevation in feet	Specific Location of Collection	pH	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub> in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by			
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)						Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents
LIVERMORE CANAL AT PATTERSON RESERVOIR (STA. 214)																					
10-9-62 0935	707.4	Reservoir	4.06	7.9	26	11	47	2.6	0	104	31	68	1.0	0.2	0.18	16	288	48	109	24	OKR
11-1-62 1637	708.3	Reservoir	5.23	8.2	27	13	57	2.7	0	111	38	80	0.5	0.2	0.23	16	308	50	121	30	
11-20-62 1059	706.95	Reservoir	5.67	8.0	26	15	64	2.9	0	112	—	2.57	—	—	0.27	Turb. = 2.0	346	51	128	36	
12-9-62 1800	703.4	Reservoir	6.42	8.2	33	14	73	3.2	0	122	48	10.1	0.9	0.2	0.27	17	387	52	141	41	
12-24-62 1520	707.9	Reservoir	6.90		34	15	78	3.4		56	114	2.57	0.2	0.30	Al=0.10 Pb=0.00 As=0.01 Mn=0.00 Cr=0.00 Se=0.00 S=0.003	409	53	147			
1-7-63 1330		Reservoir	6.74	8.8	34	16	77	3.4	9	107	56	11.4	0.9	0.2	0.27	16	423	52	149	47	
1-21-63 1420	702.7	Reservoir	7.44	9.0	38	15	85	3.2	8	114	61	12.3	0.2	0.2	0.30	16	438	54	156	49	
2-18-63 1525	695.85	Reservoir	6.88	8.2	29	17	86	3.6	0	113	58	12.0	1.2	0.3	0.29	16	407	56	144	51	
3-1-63 1610	692.1	Reservoir	7.09	8.2	32	16	83	3.5	0	123	59	12.1	0.3	0.1	0.28	17	337	55	145	44	
3-18-63 1650	689.0	Reservoir	7.09	8.4	32	17	77	3.5	3	116	60	11.7	1.3	0.1	0.22	18	358	52	150	50	
4-1-63 1545		Canal	7.16	7.9	34	17	83	3.0	0	112	82	10.9	1.1	0.2	0.39	15	442	53	156	64	
4-15-63 1620		Canal	7.08	8.5	32	16	82	3.2	6	96	83	10.6	0.4	0.1	0.24	8.8	429	54	147	60	
4-29-63 1545	705.4	Canal	7.72	7.9	39	17	85	3.7	0	126	90	11.7	0.6	0.2	0.32	18	458	52	168	65	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>VI</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs. TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

# ANALYSES OF SURFACE WATER

SOUTH BAY AQUEDUCT

Date and time sampled (P.S.T.)	Water Elevation (feet)	Temp. in deg. F.	Specific Location of Collection	Specific Conductance (micro-mhos/cm at 25° C.)	Mineral constituents in equivalents per million												Total dissolved solids in ppm	Per cent solid in ppm	Hardness as CaCO <sub>3</sub> Total N.C. ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Other constituents						
LIVERMORE CANAL AT PATTERSON RESERVOIR (STA. 214)																						
5-13-63 1425	707.8		Canal	830	38 1.90	17 1.42	88 3.83	3 0.08	0	122 2.00	88 1.83	119 3.36	0.2 0.00	0.3 0.02	0.46	15 AS=0.01 Cu=0.00 Zn=0.00	434	53	166	66	DNR	
5-27-63 1350	707.7		Canal	795	36 1.80	19 1.54	93 4.04	3.2 0.08	0	120 1.97	90 1.87	122 3.44	2.0 0.03	0.2 0.01	0.54	18 AS=0.02 Cu=0.00 Zn=0.00	469	54	167	69		
6-10-63 1600	707.4		Canal	359	22 1.10	7.8 0.64	36 1.48	1.8 0.05	0	72 1.18	36 0.71	68 1.53	0.9 0.01	0.1 0.00	0.22	15 AS=0.00 Cu=0.00 Zn=0.00	193	45	87	28		
6-24-63 1240	708.6		Canal	310	18 0.90	7.3 0.60	27 1.17	1.8 0.05	0	64 1.05	28 0.58	60 1.13	0.5 0.01	0.2 0.01	0.17	13 AS=0.00 Cu=0.00 Zn=0.00	173	43	75	23		
7-8-63 1250	708.1		Canal	318	19 0.95	7.2 0.59	26 1.13	1.8 0.05	0	65 1.06	26 0.54	61 1.16	0.4 0.01	0.2 0.01	0.19	13 AS=0.01 Cu=0.00 Zn=0.00	175	42	77	24		
7-22-63 1400	702.5		Canal	350	20 1.00	8.5 0.70	36 1.57	1.9 0.05	0	77 1.26	30 0.62	68 1.53	0.5 0.01	0.1 0.00	0.13	14 Cu=0.00 Zn=0.00	201	47	85	22		
8-5-63 1530	709.1		Canal	337	19 0.95	8.9 0.73	31 1.35	2.0 0.05	0	80 1.31	27 0.56	63 1.21	0.1 0.00	0.1 0.00	0.15	9.0 Cu=0.00 Zn=0.00	188	44	84	18		
8-19-63 1345	709.2		Canal	368	21 1.05	9.8 0.81	35 1.52	1.8 0.05	0	88 1.44	27 0.56	50 1.41	0.7 0.01	0.2 0.01	0.18	15 Cu=0.01 Zn=0.00	212	44	93	21		
9-3-63 1750			Canal	389		2.00c					28 0.58	53 1.49					220		100			
9-30-63 1600	706.0		Canal	590		2.76c					67 0.98	94 2.65					348		138			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr<sup>6+</sup>), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFD), Metropolitan Water District of Southern California (MWD), Los Angeles Department of Water and Power (LADWP), City of Los Angeles, Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBPH), Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

125-54-41 4-63 200

TABLE D-3

## SUMMARY OF COLIFORM ANALYSES

Station	Station Number	Coliform MPN/ml		
		Maximum	Median	Minimum
<u>North Coastal Region (No. 1)</u>				
Gualala River, South Fork, near Annapolis	9a	620	18.5	0.62
Navarro River near Navarro	8b	230	4.3	0.23
Noyo River near Fort Bragg	10c	230	13	0.23
Russian River, East Fork, at Potter Valley Powerhouse	10a	620	6.2	0.23
Russian River at Guerneville	10	7,000+	10.6	2.1
Russian River near Healdsburg	9	7,000+	14.6	0.23
Russian River near Hopland	8a	2,400	57.5	2.3
<u>San Francisco Bay Region (No. 2)</u>				
Alameda Creek near Niles	73	2,400	62	1.3
Coyote Creek near Madrone	82	620	6.2	0.045
Los Gatos Creek near Los Gatos	74	620	6.2	0.21
Napa River near St. Helena	72	7,000+	230	6.2
<u>Central Coastal Region (No. 3)</u>				
Carmel River at Robles del Rio	83	62	12.1	0.62
Nacimiento River near San Miguel	43b	230	23	0.21
Pajaro River near Chittenden	77	7,000+	62	2.3
Salinas River near Bradley	43c	2,400	6.2	0.23
Salinas River at Paso Robles	43a	2,400	126	5
Salinas River near Spreckels	43	7,000+	230	2.3
San Antonio River near Pleyto	43d	62	6.2	0.62
San Benito River near Bear Valley Fire Station	77a	620	13.8	0.23
San Lorenzo River at Big Trees near Felton	75	2,400	23	2.3
Soquel Creek at Soquel	76	2,400	39	0.62
Uvas Creek near Morgan Hill	96	620	6.2	0.62

## SPECTROGRAPHIC ANALYSES OF SURFACE WATER

Station	Sto No	Date	Constituents in parts per billion																
			Aluminum (Al)	Beryllium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chromium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germanium (Ge)	Manganese (Mn)	Molybdenum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
NORTH COASTAL REGION (NO. 1)																			
RUSSIAN RIVER, EAST FORK AT POTTER VALLEY POWERHOUSE	10a	5-7-63	247	< 1.3	< 1.3	< 3.3	< 1.3	< 1.3	< 3.3	23	< 6.7	< 1.3	≤ 3.3	< 1.3	2.6	< 3.3	< 1.3	< 1.3	< 6.7
RUSSIAN RIVER, EAST FORK AT POTTER VALLEY POWERHOUSE	10a	9-11-63	6.3	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	4.9	< 13	< 0.67	< 3.3	≤ 0.67	≤ 0.67	< 3.3	< 1.3	< 0.67	< 13
RUSSIAN RIVER AT GUERNVILLE	10	5-6-63	73	< 1.3	< 1.3	< 3.3	< 3.3	< 1.3	< 3.3	10	< 6.7	< 1.3	≤ 3.3	< 1.3	3.0	< 3.3	< 1.3	< 1.3	< 6.7
RUSSIAN RIVER AT GUERNVILLE	10	9-13-63	8.0	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	4.1	< 13	< 0.67		≤ 0.67	≤ 0.67	< 3.3	< 1.3	5.3	< 13
SAN FRANCISCO BAY REGION (NO. 2)																			
ALAMEDA CREEK NEAR NILES	73	5-16-63	41	< 1.3	< 1.3	< 3.3	< 3.3	< 1.3	< 3.3	5.2	< 6.7	< 1.3	< 3.3	≤ 1.3	3.5	< 3.3	< 1.3	8.7	< 6.7
ALAMEDA CREEK NEAR NILES	73	9-4-63	26	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	26	< 13	< 0.67	< 3.3	≤ 0.67	≤ 0.67	< 3.3	< 1.3	21	< 13
ARROYO DEL VALLE NEAR LIVERMORE	71	5-16-63	23	< 1.3	< 1.3	< 3.3	< 3.3	< 1.3	< 3.3	4.3	< 6.7	< 1.3	< 3.3	≤ 1.3	< 1.3	< 3.3	< 1.3	< 1.3	< 6.7
ARROYO DEL VALLE NEAR LIVERMORE	71	9-3-63	9.3	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	9.3	< 13	< 0.67	< 3.3	< 0.67	≤ 0.67	< 3.3	< 1.3	< 0.67	< 13
COYOTE CREEK NEAR MADRONE	82	5-16-63	193	< 1.3	< 1.3	< 3.3	< 3.3	< 1.3	< 3.3	31	< 6.7	< 1.3	< 3.3	< 1.3	4.1	< 3.3	< 8.0	< 1.3	< 6.7
COYOTE CREEK NEAR MADRONE	82	9-5-63	7.3	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	17	< 13	< 0.67	< 3.3	≤ 0.67	2.9	< 3.3	6.0	< 0.67	< 13
NAPA RIVER NEAR ST. HELENA	72	5-8-63	80	< 1.3	< 1.3	< 3.3	< 3.3	< 1.3	< 3.3	17	< 6.7	< 1.3	17	< 1.3	3.3	< 3.3	< 1.3	5.9	< 6.7
CENTRAL COASTAL REGION (NO. 3)																			
PAJAMO RIVER AT CHITTENDEN	77	5-15-63	25	< 1.3	< 1.3	< 3.3	< 3.3	< 1.3	< 3.3	< 3.3	< 6.7	< 1.3	< 3.3	< 1.3	6.4	< 3.3	< 1.3	6.7	< 6.7
PAJAMO RIVER AT CHITTENDEN	77	9-5-63	8.0	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	9.3	< 13	< 0.67	< 3.3	≤ 0.67	4.5	< 3.3	< 1.3	11	< 13
SALINAS RIVER NEAR SPECKELS	43	5-16-63	45	< 1.3	< 1.3	< 3.3	< 3.3	< 1.3	< 3.3	5.7	< 6.7	< 1.3	< 3.3	≤ 1.3	< 1.3	< 1.3	< 1.3	11	< 6.7
SALINAS RIVER NEAR BRADLEY	43c	9-4-63	8.0	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	11	< 13	< 0.67	8.0	19	7.3	< 3.3	< 1.3	6.3	< 13



TABLE D-5  
RADICASSAYS OF SURFACE WATER

Region (No. 1)	Date	Sample No.	Pico curies per liter		Sample No.
			Sample	Reference	
BIG RIVER NEAR MOUTH	8c	5/7/63	0 $\pm$ 0.2	4.2 $\pm$ 4.7	0.8 $\pm$ 4.7
BIG RIVER NEAR MOUTH	8c	9/13/63	0 $\pm$ 0.3	2.2 $\pm$ 6.2	0 $\pm$ 6.1
GUALALA RIVER, SOUTH FORK NEAR ANNAPOLIS	9a	5/6/63	0 $\pm$ 0.2	2.2 $\pm$ 4.2	0 $\pm$ 4.2
GUALALA RIVER, SOUTH FORK NEAR ANNAPOLIS	9a	9/13/63	0 $\pm$ 0.3	0 $\pm$ 6.1	0 $\pm$ 6.1
NAVARRO RIVER NEAR NAVARRO	8b	5/7/63	0 $\pm$ 0.2	7.9 $\pm$ 4.4	2.2 $\pm$ 4.3
NAVARRO RIVER NEAR NAVARRO	8b	9/13/63	0.5 $\pm$ 0.4	4.0 $\pm$ 6.2	5.0 $\pm$ 6.2
NOYO RIVER NEAR FORT BRAGG	10c	5/7/63	0 $\pm$ 0.1	6.4 $\pm$ 4.3	2.6 $\pm$ 4.3
NOYO RIVER NEAR FORT BRAGG	10c	9/13/63	0.2 $\pm$ 0.3	2.9 $\pm$ 6.2	0.4 $\pm$ 6.1
RUSSIAN RIVER, EAST FORK AT POTTER VALLEY POWERHOUSE	10a	5/7/63	0.3 $\pm$ 0.2	10.4 $\pm$ 4.4	19.8 $\pm$ 4.6
RUSSIAN RIVER, EAST FORK AT POTTER VALLEY POWERHOUSE	10a	9/11/63	0 $\pm$ 0.4	5.1 $\pm$ 6.2	5.1 $\pm$ 6.2
RUSSIAN RIVER AT GUERNEVILLE	10	5/6/63	0.1 $\pm$ 0.2	1.1 $\pm$ 4.3	6.4 $\pm$ 4.4
RUSSIAN RIVER AT GUERNEVILLE	10	9/13/63	0.1 $\pm$ 0.3	0.8 $\pm$ 6.2	0 $\pm$ 6.1
RUSSIAN RIVER NEAR HEALDSBURG	9	5/6/63	0 $\pm$ 0.2	6.6 $\pm$ 4.2	7.8 $\pm$ 4.3
RUSSIAN RIVER NEAR HEALDSBURG	9	9/11/63	0.1 $\pm$ 0.3	4.1 $\pm$ 6.2	0 $\pm$ 6.1
RUSSIAN RIVER NEAR HOPLAND	8a	5/8/63	0.1 $\pm$ 0.2	8.4 $\pm$ 4.8	5.8 $\pm$ 4.8

# RADIOASSAYS OF SURFACE WATER

Location	Date	Silver Alpha		Pico curies per liter		Solid He-3	
		90 ± Alpha	90 ± Alpha	Dissolved Beta	Dissolved Beta	Solid He-3	Solid He-3
<u>REGION (NO. 1)</u>							
RUSSIAN RIVER NEAR HOPLAND	8a	9/11/63	0 ± 0.3	0.3 ± 0.4	0 ± 6.2	3.3 ± 6.2	
<u>REGION (NO. 2)</u>							
ALAMEDA CREEK NEAR NILES	73	5/14/63	0 ± 0.3	0 ± 0.3	6.4 ± 6.2	4.3 ± 6.2	
ALAMEDA CREEK NEAR NILES	73	9/4/63	0.1 ± 0.4	0.5 ± 0.5	7.0 ± 6.1	8.0 ± 6.1	
ARROYO DEL VALLE NEAR LIVERMORE	71	5/14/63	0.2 ± 0.2	0.5 ± 0.3	1.0 ± 6.2	13.4 ± 6.4	
ARROYO DEL VALLE NEAR LIVERMORE	71	9/3/63	0 ± 0.3	0 ± 0.3	11.2 ± 6.2	4.7 ± 6.1	
COYOTE CREEK NEAR MADRONE	82	5/14/63	0.2 ± 0.3	0.4 ± 0.3	4.7 ± 6.4	8.8 ± 6.5	
COYOTE CREEK NEAR MADRONE	82	9/5/63	0.1 ± 0.4	0 ± 0.4	0 ± 6.3	0 ± 6.2	
LOS GATOS CREEK NEAR LOS GATOS	74	5/16/63	0 ± 0.4	0 ± 0.4	0.9 ± 6.4	0 ± 6.4	
LOS GATOS CREEK NEAR LOS GATOS	74	9/5/63	0.1 ± 0.4	0 ± 0.3	0 ± 6.3	0 ± 6.2	
NAPA RIVER NEAR ST. HELENA	72	5/8/63	0 ± 0.1	0 ± 0.1	7.3 ± 4.5	4.8 ± 4.2	
<u>REGION (NO. 3)</u>							
CARMEL RIVER AT ROBLES DEL RIO	83	5/16/63	0.3 ± 0.4	0 ± 0.3	6.9 ± 6.3	1.9 ± 6.2	
NACIMIENTO RIVER NEAR SAN MIGUEL	43b	9/4/63	0.4 ± 0.4	0.1 ± 0.4	0 ± 6.1	0 ± 6.1	
PAJARO RIVER NEAR CHITTENDEN	77	5/15/63	0.3 ± 0.2	0.1 ± 0.2	4.0 ± 6.3	0.4 ± 6.2	
PAJARO RIVER NEAR CHITTENDEN	77	9/5/63	0 ± 0.4	0 ± 0.3	8.4 ± 6.2	0.6 ± 6.5	

TABLE D-5  
RADIOASSAYS OF SURFACE WATER

Station	Sta No	Date	Pico curies per liter		Solid Beta	Solid Beta
			Dissolved Alpha	Solid Alpha		
<u>REGION (NO. 3)</u>						
SALINAS RIVER NEAR BRADLEY	43c	5/15/63	0 $\pm$ 0.2	0.7 $\pm$ 0.4	6.8 $\pm$ 6.2	16.3 $\pm$ 6.3
SALINAS RIVER NEAR BRADLEY	43c	9/4/63	0 $\pm$ 0.6	0 $\pm$ 0.5	0 $\pm$ 6.2	1.9 $\pm$ 6.2
SALINAS RIVER AT PASO ROBLES	43a	5/15/63	0.3 $\pm$ 0.5	0 $\pm$ 0.3	1.5 $\pm$ 6.3	0 $\pm$ 6.3
SALINAS RIVER NEAR SPRECKELS	43	5/16/63	0.6 $\pm$ 0.4	0.2 $\pm$ 0.3	13.1 $\pm$ 6.3	7.8 $\pm$ 6.2
SALINAS RIVER NEAR SPRECKELS	43	9/5/63	0 $\pm$ 0.4	0 $\pm$ 0.4	29.7 $\pm$ 6.5	0.5 $\pm$ 6.0
SAN ANTONIO RIVER NEAR PLEYTO	43d	5/15/63	0.5 $\pm$ 0.5	0 $\pm$ 0.4	0 $\pm$ 6.1	0.1 $\pm$ 6.1
SAN BENITO RIVER NEAR BEAR VALLEY FIRE STATION	77a	5/15/63	0.1 $\pm$ 0.3	0.1 $\pm$ 0.3	4.8 $\pm$ 6.2	3.6 $\pm$ 6.2
SAN BENITO RIVER NEAR BEAR VALLEY FIRE STATION	77a	9/4/63	0.5 $\pm$ 0.6	0 $\pm$ 0.4	4.8 $\pm$ 6.2	0 $\pm$ 6.1
SAN LORENZO RIVER AT BIG TREES NEAR FELTON	75	5/16/63	0 $\pm$ 0.4	0 $\pm$ 0.4	0 $\pm$ 6.3	0 $\pm$ 6.3
SAN LORENZO RIVER AT BIG TREES NEAR FELTON	75	9/5/63	0.3 $\pm$ 0.4	0 $\pm$ 0.4	5.8 $\pm$ 6.2	2.4 $\pm$ 6.1
OSOQUEL CREEK AT SOQUEL	76	5/16/63	0.1 $\pm$ 0.3	0 $\pm$ 0.3	0 $\pm$ 6.2	0 $\pm$ 6.1
OSOQUEL CREEK AT SOQUEL	76	9/5/63	0 $\pm$ 0.4	0 $\pm$ 0.4	5.9 $\pm$ 6.2	6.9 $\pm$ 6.2
UVAS CREEK NEAR MORGAN HILL	96	5/14/63	0 $\pm$ 0.4	0 $\pm$ 0.4	8.5 $\pm$ 6.2	0.2 $\pm$ 6.1
UVAS CREEK NEAR MORGAN HILL	96	9/5/63	0 $\pm$ 0.3	0 $\pm$ 0.3	0 $\pm$ 6.1	0 $\pm$ 6.0

TABLE D-6

## DESCRIPTION OF SALINITY OBSERVATION STATIONS

1963

STATION	Miles from Golden Gate (c)	Time interval (b)		LOCATION
		Hours	Min	
Sobrante Beach - San Pablo Bay	20.5	2	50	South shore of San Pablo Bay from wharf approximately 1.5 miles upstream from Point Pinole.
Crockett - San Pablo Bay	27.7	3	30	West end of Carquinez Strait, south shore, 0.2 mile east of Carquinez Bridge on wharf of C and H Sugar Refinery Corporation.
Benicia - Carquinez Strait	32.5	3	50	East end of Carquinez Strait, north shore, 1.1 miles west of Southern Pacific Company railroad bridge at Benicia Arsenal.
Martinez - Carquinez Strait	33.1	3	50	Sampled from Shell Oil Company dock, about 0.6 mile downstream from Southern Pacific Company railroad bridge.
West Suisun - Suisun Bay	37.0	4	10	West end of Suisun Bay, north shore, 2.5 miles northeast of Southern Pacific railroad bridge at service pier of U. S. Maritime Commission, Reserve Fleet mooring area.
Innisfoll Ferry - Suisun Bay	47.3	4	50	Montezuma Slough, about one mile east of junction with Cutoff Slough near north end of Grizzly Island.
Port Chicago - Suisun Bay	41.0	4	20	South Shore of Suisun Bay at U. S. Naval ammunition loading wharf below Port Chicago.
Spoonbill Creek - Suisun Bay	48.9	5	05	At Sacramento Northern Railroad crossing.
Pittsburg - Suisun Bay	48.0	5	00	East end of Suisun Bay, south shore, at Pittsburg Yacht Harbor.
Collinsville - Sacramento River	50.8	5	25	Sacramento River, north bank at junction with San Joaquin River.

## MAXIMUM OBSERVED SALINITY AT BAY AND DELTA STATIONS

In parts of chloride per million parts of water\*

STATION	WATER YEAR										
	1931	1938	1939	1944 c	1952	1955	1956 d	1958	1959	1961	1962
Sacramento - San Joaquin System Unimpaired Runoff in Percent of Average (e)	34	188	49	62	168	63	175	166	66	61	
Sobrante Beach**					14200	19000	16200	13800	17200	15000	15600
Crockett					13200	16600	15300	11900	15000	19900	13900
Benicia**				13900	10400	15100	12300	12100	19200	14000	12300
Martinez	16900	11600	16400		8900	11900	11900	7150	10200	11600	12700
West Suisun**					7900	12600	11200	7520	13200	13200	11100
Innisfoll Ferry**	14000	3300	13600	7900	4200	5780	5200	3040	9640	13900	5690
Port Chicago					6900	12500	9750	5830	15640	11900	9370
Spoonbill Creek	13900	2560	11800	7300	2800	6400	4040	930	6270	5900	3540
Pittsburg					1200	7800	3440	1200	5110	3920	3980
Collinsville	12600	860	10400	4700	783	3880	2280	550	5430	4300	2430

\* Ocean water contains approximately 18,200 parts per million.

\*\* Station discontinued July 1963.

a Mileage measured to station along main channel. For stations off the main channel, the mileage shown is the same distance along the main channel to a point whereon the time of the occurrence of the tidal phase is the same as that of the observation station.

b Time interval between high tide at Golden Gate and time for taking samples at station.

c Releases of stored water from Shasta Lake commenced in 1944.

d Releases of stored water from Folsom Reservoir commenced in 1956.

e Average taken as mean annual unimpaired flow at foothill stations of major tributaries for 50-year period October 1907 through September 1957.

## TABLE D-7

## SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS\*

In parts of chloride per million parts of water

STATION	DATE							
	10-2-62	10-6-62	10-10-62	10-14-62	10-18-62	10-22-62	10-26-62	10-30-62
Sobrante Beach	13300	a12700	a14200	11900	a6530	4490	7520	8680
Crockett	11400	10700	e11500	9910	2640		4760	6230
Benicia	7820	9180	e9780	7920	944	4530	3970	5190
Martinez	a9000	a8470	e9070	a8870	1320	3580	2910	a3970
West Suisun	7820	bd8280	7080		755	ae944		2470
Innisfail Ferry	2740	a2890			a1510		781	
Port Chicago	6460	6130	d7830	2080	566	755	969	
Spoonbill Creek	1010	a1490	a1250	1560	a212	85	71	55
Pittsburg	492	a642	a642		a142	61	19	29
Collinsville	a426	ad447	a382	247	a68		40	31

STATION	DATE							
	11-2-62	11-6-62	11-10-62	11-14-62	11-18-62	11-22-62	11-26-62	11-30-62
Sobrante Beach	8600	9020	11000	10400	a9500	13000	11700	10200
Crockett		a7190	9770	8540	7130	9220	10000	7670
Benicia	4200	4630	5960	7340	4050	8100	4920	5200
Martinez	7500	5820	a6980	7900	5710	8960	9250	8290
West Suisun	1730	2120		4400	1390	5180		4000
Innisfail Ferry	843	935			1080	1040	1240	
Port Chicago	1470			d3170	4360	6090	2640	
Spoonbill Creek	a56	65	135	260	138	165	357	280
Pittsburg		27	bd61	136	53	de63	314	81
Collinsville	23	21	27	a26	26	25	48	a41

STATION	DATE							
	12-2-62	12-6-62	12-10-62	12-14-62	12-18-62	12-22-62	12-26-62	12-30-62
Sobrante Beach	9440	9890	10200	10200	8140	8790	7360	8350
Crockett	7330	7040	8580	7000	7130	5900	5670	5590
Benicia	4510	5070	5130	5460	4740		3280	3080
Martinez	6860	7830	7710	5980	5070	6520	6360	
West Suisun	2320		d2630	d3080	2410	1130	1390	810
Innisfail Ferry				728	1010			713
Port Chicago			2580		1450	2760		
Spoonbill Creek	171	71	38	72	46	23	30	
Pittsburg		34		29	d27		24	
Collinsville	37	20	15	a10	12	15	11	12

STATION	DATE							
	1-2-63	1-6-63	1-10-63	1-14-63	1-18-63	1-22-63	1-26-63	1-30-63
Sobrante Beach	8230	9060	9120	8680	8250	10600	11000	11100
Crockett	5780	d7480	7340	5340	7290			9250
Benicia	2810	5400	4470	2540	6070	7580	6380	bd6090
Martinez	5130	4470	7110	a5670	7360	9180	8020	a8310
West Suisun	1160	2530		2140	ae1840		4030	3790
Innisfail Ferry		492		641		856		1200
Port Chicago		2330	2060	443	4340	4240	4070	4070
Spoonbill Creek	30	32	62	42	57	376	431	444
Pittsburg	27	bd27		d36	47	d96		146
Collinsville	12	22	14	24	20	142	52	106

\* Samples taken at four-day intervals approximately one and one-half hours after high high tide.

a Taken after low high tide.

b Taken on following day.

c Taken two days later.

d Taken over one hour off scheduled time.

e Taken on preceding day.

f Taken two days earlier.

g Station located above tidal action.

TABLE D-7

## SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS\*

In parts of chloride per million parts of water

STATION	DATE							
	2-2-63	2-6-63	2-10-63	2-14-63	2-18-63	2-22-63	2-26-63	
Sobrante Beach	4700	1440	4690	2200	3470	4490	a6170	
Crockett	3550	763	2400	1670	1970	3970	3370	
Benicia	1910	54	514	1060	250	2800	810	
Martinez	2850	38	935		386		a1870	
West Suisun	496		76	59		492	178	
Innisfail Ferry	1050	142	226		255	337	a450	
Port Chicago	bd37		35	19		e371	33	
Spoonbill Creek	173	8	14	19	20	31	a29	
Pittsburg		14			bd25	32	ab32	
Collinsville	d16	9		22	14	18	a48	

STATION	DATE							
	3-2-63	3-6-63	3-10-63	3-14-63	3-18-63	3-22-63	3-26-63	3-30-63
Sobrante Beach	6360	8060	9090	a11200	7860	12300	ad11400	5340
Crockett	d3860	6700		7280	5730	11200	10100	5920
Benicia			5420	3750	3650	6700	7090	3400
Martinez	3030	6890		5630	6540	9610	a5730	3980
West Suisun	1530			2800	ae1070	510	2600	849
Innisfail Ferry	479			a476	524	529	a752	a752
Port Chicago	466	1616	1690	2620	ae1140		2820	680
Spoonbill Creek	29	31	32	a34	46	284	a246	49
Pittsburg		24	30	abd32	40		a95	73
Collinsville		17	27	25	23	30	a30	23

STATION	DATE							
	4-2-63	4-6-63	4-10-63	4-14-63	4-18-63	4-22-63	4-26-63	4-30-63
Sobrante Beach	5150	adf8450	a3790	a2010	a2670	a2960	a2770	3610
Crockett	1460	4180	2230	874	1070	1140	1260	807
Benicia	291	2620	158	85	b655	316		277
Martinez	583	2720	a3570	801	a22		de866	221
West Suisun	78	121	46	48	de29	36	30	ae70
Innisfail Ferry	607		a170	ad121		a86	a109	
Port Chicago	24	de308	d20		b17		d56	ae61
Spoonbill Creek		a19	a12	10	a7	a12	a10	8
Pittsburg	bd21				a7	abd23	a21	16
Collinsville	10	a12	a16	4	a6		7	10

STATION	DATE							
	5-2-63	5-6-63	5-10-63	5-14-63	5-18-63	5-22-63	5-26-63	5-30-63
Sobrante Beach	3270	a6040	a7330	a5150	a8910	a7920	a7520	a8510
Crockett	2670		3790	2380	5540	5150	3860	e3960
Benicia	1090	2820	2180	3910	3910	4060	2570	e2670
Martinez	1460	a1390	a2030	1140	5150		3960	e2970
West Suisun	129	317	163	287	2250	4460	198	e366
Innisfail Ferry		a134		148	a121			
Port Chicago	bd33	d24	40	16	bd1110	624	44	
Spoonbill Creek	a15	a12	a14	15	a14	a12	12	a12
Pittsburg	a18		a15	13	a13	a13	a15	
Collinsville	a8	a8	a11	10	a17	a16	12	a8

\* Samples taken at four-day intervals approximately one and one-half hours after high high tide.

a Taken after low high tide.

b Taken on following day.

c Taken two days later.

d Taken over one hour scheduled time.

e Taken on preceding day.

f Taken two days earlier.

g Station located above tidal action.

TABLE D-7

## SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS\*

In parts of chloride per million parts of water

STATION	DATE							
	6-2-63	6-6-63	6-10-63	6-14-63	6-18-63	6-22-63	6-26-63	6-30-63
Sobrante Beach	a5440	a9110	e10500	e12100	e11500	e10300	9920	e11700
Crockett	4750	5640	6730	e6830	9600	8510	7720	
Bealcia	3370	4750	5540	e4750	7330	6930	3370	e5540
Martinez	1980	5350	5940	e4950	6140	6530	6930	e7030
West Suisun	1240	2480	4010	e2970		5440	3860	e3860
Innisfail Ferry					abd109			
Fort Chicago	bd495	1810	2600	e990	3910			
Spoonbill Creek	a13			a30	ed109	a188	96	a166
Pittsburg			d19	a22	a58	a64	ebd62	
Collinsville	a10		13	a15	a41	a14	a25	

STATION	DATE							
	7-2-63	7-6-63	7-10-63	7-14-63	7-18-63	7-22-63	7-26-63	7-30-63
Crockett	9180	8920	8820	e10400	11700	12200	10300	e11300
Martinez	8700	ad6450	a8370	aed6250	9510	9530	a8750	e9780
Port Chicago		5900	4470	aed4490	7330	7720		e4850
Spoonbill Creek		a409	a586	e1100	d882	abd1720	1270	e1920
Pittsburg	a84	cd426		abd353		d817		aed1170
Collinsville	a56	a40	368	a311	a445	1090	a728	a794

STATION	DATE							
	8-2-63	8-6-63	8-10-63	8-14-63	8-18-63	8-22-63	8-26-63	8-30-63
Crockett	12900	13100	12600	e12400	13200	12400	10900	e12100
Martinez	10600	a8000	11500	e8180	11400	9880	9710	e11400
Port Chicago	a5640	7830	6670	e8120	8780	8530	7190	9200
Spoonbill Creek	a2450	a2640	a2350	a2500		2520	2250	a2940
Pittsburg				ad906	abd1130		a1350	
Collinsville	a1260				e1720	1980	a1030	e1370

STATION	DATE							
	9-2-63	9-6-63	9-10-63	9-14-63	9-18-63	9-22-63	9-26-63	9-30-63
Crockett	12600	12400	11800	11000	10800	9800	10700	d9900
Martinez		10900	a8240	10800	9310	a8820		
Port Chicago		5490	5860	6280	5290	3330	3820	5490
Spoonbill Creek	a2350	2300	1690		882	417	a368	a735
Pittsburg					a333		e137	ebd167
Collinsville	a1030	a1400	a515	a578	a98	172	a44	a220

\* Samples taken at four-day intervals approximately one and one-half hours after high high tide.

a Taken after low high tide.

b Taken on following day.

c Taken two days later.

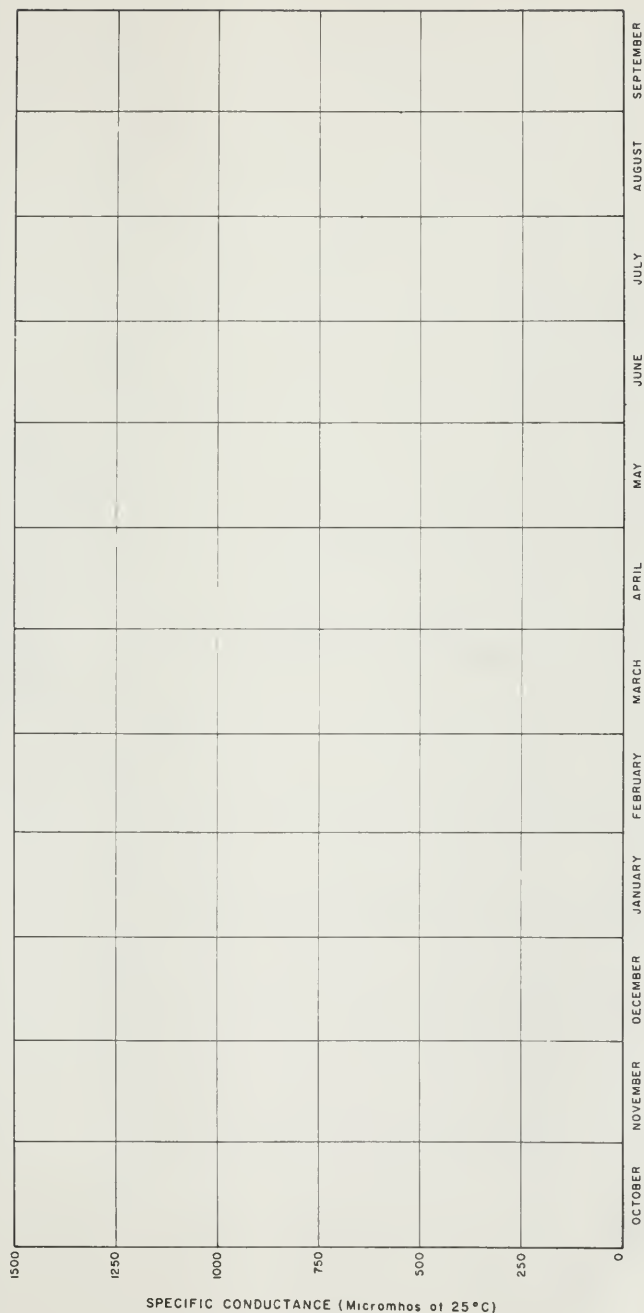
d Taken over one hour off scheduled time.

e Taken on preceding day.

f Taken two days earlier.



FIGURE D-1



ELECTRICAL CONDUCTANCE  
DAILY MEAN  
ALAMEDA CREEK NEAR NILES (STA 73)  
1963

ELECTRICAL CONDUCTANCE  
DAILY READINGS AT 1300 HOURS  
BETHANY FOREBAY AT  
SOUTH BAY PUMPING PLANT (STA 207)  
1963

APPENDIX E

GROUND WATER QUALITY



## GROUND WATER QUALITY

Data presented in this appendix are measured values of selected quality characteristics of ground water samples collected in the Central Coastal Area during the period from July 1, 1962 through June 30, 1963. This appendix consists of a table showing results of analyses of ground water and a table showing results of radioassay of ground water. Wells and ground water basins are numbered in accordance with the system described in Appendix C. The data are presented in water pollution control board region, ground water basin, and well number order.

### Analyses of Ground Water

Tabulated values for dissolved minerals are the analytical quantity reported in parts per million (ppm) and a computed value for equivalents per million (epm). Electrical conductivity is reported as micromhos at 25°C and water temperature is reported in degrees Fahrenheit. Values for temperature are those measured in the field at the time of sampling. Laboratory analyses of ground water were performed by the Department of Water Resources, the United States Geological Survey, and Lein Laboratory, all in accordance with "Standard Methods for the Examination of Water and Waste Water", 11th Edition, or in accordance with U. S. Geological Survey Water Supply Paper 1454, "Methods for Collection and Analyses of Water Samples". The methods yield comparable results. Heavy metal concentrations were determined by "wet" analyses.

Table E-1 presents analyses of ground water. Definitions of abbreviations used in this table are as follows:

1. TDS---Total dissolved solids by gravimetric determination at 180°. The superscript "a" indicates a value determined by

summation of constituents.

2. T.O.--Odor.
3. ABS---Alkyl benzene sulfonate.
4. DWR---Department of Water Resources.
5. USGS--United States Geological Survey.
6. LL----Lein Laboratories.

#### Radioassay of Ground Water

Radioassay of ground water is presented in Table E-2. Determinations were made by the California Disaster Office of suspended and dissolved alpha and beta activities in some samples and for gross activity in other samples. The term pico curie used in this report is also written micro-micro curies and is further defined as  $10^{-12}$  curies. The most probable error is reported along with the measured value. Results should be considered qualitative and undue emphasis should not be given to quantitative values.

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conduct- ance in micro- mhos at 25° C	Mineral constituents in parts per million										Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub> Total ppm	Analyzed by c		
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Bicar- bonate (CO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- tro- gen (NO <sub>3</sub> )	Fluor- ine (F)	Silica (SiO <sub>2</sub> )				Other constituents <sup>d</sup>	
	NORSEM				OKLAH VALLEY (1-15)														
G. C. Gilley domestic	148/124-5K1	9-29-62		620	67 31.34	22 1.84	37 1.61	1.7 0.04	0 0.00	50 1.04	1.2 0.03	0.9 0.01	1.0 0.05	0.9 0.1	25		376	24	USGS
L. Johnson domestic	148/124-11N1	10-62		294	18 0.90	20 1.67	8.9 0.39	0.7 0.02	0 0.00	17 0.35	7.8 0.22	3.6 0.15	0.7 0.04	0.3 0.1	18		184	13	USGS
M. Nelson domestic	148/124-24K1	10-2-62	65	348	23 1.15	24 1.97	14 0.61	0.2 0.01	6 0.20	14 0.29	1.4 0.11	4.1 0.17	0.4 0.02	1.0 0.1	28		199	16	USGS
CITY OF ELKLAND municipal	158/124-16C1	10-62	66	287	28 1.40	13 1.10	12 0.52	1.8 0.05	0 0.00	14 0.29	7.8 0.22	1.3 0.02	0.6 0.03	0.2 0.1	16		170	17	USGS
Logans Water Co. municipal	148/124-21M1	10-2-62		257	25 1.25	12 0.99	9.8 0.43	1.0 0.03	3 0.10	8.0 0.17	4.0 0.11	1.0 0.02	0.2 0.01	0.5 0.1	16		141	16	USGS
B. Breggs Ranch domestic and irrigation	158/124-35D1	10-62		386	34 1.70	12 1.02	1.30	1.0 0.02	0 0.00	6.4 0.13	7.56	0.5 0.01	0.2 0.01	0.2 0.1	35		240	32	OKR
Frank Brown domestic	168/124-501	10-62	63	353	23 1.15	19 1.53	24 1.04	0.6 0.02	0 0.00	0 0.00	24 0.66	1.4 0.02	0.9 0.05	0.1 0.1	28		202	28	USGS
Frank Brown irrigation	168/124-502	10-62	62	348	18 0.90	18 1.44	30 1.30	0.3 0.01	0 0.00	0 0.00	16 0.43	0.9 0.01	1.0 0.05	0.1 0.1	26		200	36	USGS
P. G. & F. industrial and domestic	168/124-9Q1	10-2-62	61	408	28 1.40	17 1.38	42 1.83	0.9 0.02	7 0.23	6.0 0.12	7.2 0.20	1.0 0.02	1.0 0.05	0.2 0.1	29		250	40	USGS
J. L. Nelson domestic	178/124-18A1	10-62	63	1930	38 1.90	5.1 0.42	338 14.70	0.7 0.02	0 0.00	1.0 0.02	50.5 3.82	2.1 0.03	1.2 0.06	1.2 0.1	21		1270	86	USGS
Barry Matthews domestic	178/124-28B1	10-2-62	62	212	17 0.85	9.4 0.77	11 0.48	0.3 0.01	0 0.00	15 0.31	6.8 0.19	1.7 0.07	0.7 0.04	0.3 0.1	31		149	23	USGS
					SANSÉ VALLEY (11-16)														
A. Debarcantino domestic	128/114-2F1	10-62		408	44 2.20	21 1.76	13 0.56	1.3 0.03	0 0.00	20 0.42	7.6 0.21	1.7 0.03	0.2 0.01	0.2 0.1	18		239	17	OKR
L. F. Hays irrigation	138/114-701	10-62	62	314	21 1.05	24 2.01	8.4 0.37	0.5 0.01	0 0.00	11 0.23	5.0 0.14	1.3 0.02	0.6 0.03	0.3 0.1	24		179	11	USGS
A. Dantano irrigation	138/114-18B1	10-62	62	330	23 1.15	17 1.67	17 0.74	0.9 0.02	0 0.00	12 0.25	7.4 0.21	9.7 0.16	0.3 0.02	1.5 0.1	19		190	21	USGS



TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp. in °F	Specific conductance (micro-mhos at 25° C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent iron in ppm	Hardness as CaCO <sub>3</sub> in ppm		Analyzed by	
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)			Boron (B)	Silica (SiO <sub>2</sub> )		Other constituents
	NDBEN							SANUEL VALLEY (1-16)													
J. H. Penroy & Co., Irrigation	13N/114-1801	10-62	63	194	8.1	17 0.85	10 0.83	7.1 0.31	0.9 0.02	0 0.00	106 1.74	9.0 0.19	4.2 0.12	1.6 0.03	0.7 0.03		0.4	16	115	15	84 0 USGS
Hopland Public Utility District municipal	13N/114-1981	10-62		261	8.0	14 0.70	15 1.26	17 0.74	0.4 0.01	0 0.00	135 2.21	1.0 0.02	14 0.39	6.7 0.11	0.8 0.04		0.0	40	172	27	98 0 USGS
Grace Ranch domestic, stock and irrigation	13N/114-30H1	10-62		309	8.1	24 1.20	19 1.38	10 0.44	2.0 0.05	0 0.00	168 2.75	14 0.29	7.5 0.21	2.0 0.03	0.7 0.04		0.3	16	177	13	139 1 USGS

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	Mineral constituents in parts per million												Total dissolved solids in ppm	Per cent sodium in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by		
					pH	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	equivalents per million						Other constituents <sup>a</sup>	Total ppm		M.C. ppm	
													Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)							Silica (SiO <sub>2</sub> )
H. Cloakie domestic and stock	NDS&H 3N/6M-1Q1	10-25-62		1270									165 4.65									DNR	
		4-17-63		1300	28 1.40	30 2.30	225 9.00	6.0 0.15	42 1.40	500 8.20	0 0.00	145 4.10	7.4 0.12	0.1 0.01	0.3	33		792	70	185	0	LL	
	O. White domestic and irrigation	3N/6M-3C1	10-29-62		7430								2270 64.01									DNR	
			4-17-63		3700	8.4 5.85	201 16.50	365 15.87	21 0.56	12 0.40	448 7.35	0 0.00	1080 30.46	9.6 0.15	0.1 0.01	0.4	28		2480	41	1118	730	LL
S. K. Herzog Co. domestic and stock	3N/6M-1181	10-62		1920								369 10.40										DNR	
		4-17-63		1900	8.4 2.98	27 2.21	325 14.13	7.0 0.18	6.0 0.20	555 9.10	0 0.00	346 9.75	11 0.18	0.1 0.01	0.4	37		1080	73	265	0	LL	
C. Strozzi stock	3N/6M-15H1	9-25-62	67	193								18 0.51										DNR	
		5-8-63	56	365	7.2 2.09	5.9 0.48	22 0.95	0.4 0.02	0 0.00	116 1.90	35 0.73	28 0.80	0 0.00	0.2 0.01	0.1	21		220	27	128	38	LL	
Rupprecht domestic, stock, and irrigation	3N/6M-18H1	9-26-62		610								52 1.47	13 0.21									DNR	
		5-8-63		700	7.8 1.93	51 4.15	29 1.23	0.1 0.01	0 0.00	168 2.75	43 0.91	50 1.40	130 2.10	0.1 0.01	0.1	16		510	17	304	166	LL	
Carl Johnson domestic	3N/7M-14F1	9-26-62		658								73 2.06										DNR	
		5-8-63		670	8.2 1.47	30 2.48	71 3.10	0.6 0.02	0 0.00	246 4.03	34 0.71	76 2.15	1.0 0.02	0.4 0.02	0.7	24		382	44	197	0	LL	
Lopez domestic	6N/6M-7H1	10-26-62		984								50 1.41										DNR	
		6-4-63		1120	8.5 3.26	67 5.53	94 4.10	1.4 0.04	15 0.50	580 9.50	36 0.88	60 1.70	31 0.58	0.2 0.01	2.0	18		718	31	439	0	LL	
Lopez irrigation and stock	6N/6M-7H2	10-26-62		4680								1120 31.38										DNR	
		6-4-63		4800	8.2 8.76	7.9 0.65	930 40.23	4.3 0.11	0 0.00	433 7.10	308 6.43	1260 35.53	7.6 0.12	0.2 0.01	2.0	15		2880	81	470	115	LL	

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by c				
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)		Boron (B)	Silica (SiO <sub>2</sub> )		Other constituents <sup>d</sup>	Total ppm	N.C. ppm	
	NOBEM							PETALUMA VALLEY (2-1) (Cont.)														
L. A. Bourke domestic and stock	4N/6W-21Q1	10-29-62		1060																		DR
		4-4-63		890	3.0 0.15	5.9 0.59	195 8.47	1.0 0.03	15 0.50	365 5.65	10 0.21	97 2.72	0 0.01	0.1 0.01	0.8	34			524	93	0	LL
S. K. Herzog Co. dairy and stock	4N/6W-27R1	10-25-62		372																		DR
		4-17-63		440	36 1.78	24 2.00	16 0.70	2.4 0.06	4.5 0.15	230 3.77	16 0.35	12 0.33	3.9 0.06	0.6 0.03	0.1	17			278	15	189	0
O. White irrigation and stock	4N/6W-33R1	10-29-62		5560																		DR
		4-17-63		5500	197 9.85	307 25.25	463 20.13	19 0.50	0 0.00	284 4.65	1.4 0.03	1773 50.00	8.3 0.13	0.1 0.01	0.4	25			3440	36	1755	1522
Union Oil Co. Industrial	4N/7W-20I	10-26-62		23800																		DR
		4-4-63		23000	266 13.25	2085 171.50	2800 102.17	45 1.15	0 0.00	98 1.60	1020 21.24	9650 271.28	0 0.01	0.1 0.01	0.7	25			18100	35	9238	9158
F. Riebl domestic and stock	5N/6W-30D1	10-26-62		932																		DR
		4-4-63		850	37 1.86	24 1.99	135 5.87	1.8 0.05	15 0.50	342 5.60	11 0.23	114 3.20	0 0.01	0.2 0.01	0.5	14			580	60	192	0
N. J. Matzen domestic	5N/7W-80D3	10-26-62		935																		DR
		4-4-63		900	64 3.22	33 2.67	75 3.25	3.9 0.10	12 0.40	229 3.75	29 0.61	153 4.30	0 0.01	0.1 0.01	0.1	21			560	35	295	87
Oberg Lumber Co. domestic	5N/7W-19A1	11-29-62		549																		DR
		4-4-63		540	36 1.77	9.1 0.74	67 2.90	2.6 0.07	3.0 0.10	217 3.55	29 0.60	43 1.20	0 0.01	0.1 0.01	0.1	25			334	52	126	0
Al's Barber Shop domestic	5N/7W-20L3	10-29-62		1910																		DR
		4-4-63		1700	200 10.00	28 2.29	107 4.65	2.3 0.06	6.0 0.20	186 3.05	34 0.69	390 11.00	110 1.78	0.1 0.01	0.1	41			1100	27	615	453

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance in micro-mhos at 25° C	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO <sub>3</sub>		Analyzed by c
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)			Boron (B)	Silica (SiO <sub>2</sub> )	
Arkansas Co irrigation and stock dom. stock, and irrigation	58/74-26E1	10-26-62		585	41 2.05	17 1.43	64 2.78	2.0 0.05	0	282 4.82	21 0.44	1.3 0.02	0.5 0.03	0.0	353	44	174	0	DNR
				848						69 1.94								DNR	
		4-4-63	880	62 0.21	64 0.37	197 8.35	1.5 0.04	24 0.80	351 5.75	19 0.26	0	0.2 0.01	0.3	21	534	93	29	0	LL
			10-26-62	580	36 2.30	24 1.98	36 1.57	2.7 0.07	5 0.17	224 3.67	17 0.35	1.7 0.27	0.4 0.02	0.0	391	27	214	22	DNR
H. Seaford irrigation	38/34-18G1	4-4-63		700	57 2.86	30 2.31	39 1.70	3.6 0.09	9.0 0.30	284 4.65	20 0.32	23 0.35	0.1 0.01	0.1	456	24	269	22	LL
J. P. Ryan dom. stock	38/34-18G1	9-19-62		1160			96 4.18				138 3.89	28 0.55		0.24				DNR	
				5-7-63	1000	79 3.94	26 3.00	86 3.74	1.5 0.04	15 0.50	242 5.69	37 0.77	5.0 0.08	0.4 0.02	0.1	27	563	35	347
		9-19-62	1500			118 5.13					177 4.99	169 2.72		0.19				DNR	
			5-7-63	1680								174 4.91	194 3.13						DNR
Dyke Co. Airport dom. stock	48/44-2L1	9-19-62		782			59 2.37				98 2.76			0.20				DNR	
				5-7-63	776	74 3.69	18 1.51	58 2.52	1.2 0.03	0	162 2.66	107 2.73	0.2 0.00	0.2 0.01	0	35	537	33	260
		9-19-62	290			42 1.83					32 0.90			0.14				DNR	
			5-8-63	303	96 0.43	68 0.56	41 1.78	1.3 0.03	0	87 1.43	12 0.25	20 0.32	0.1 0.01	0	51	219	62	52	0
J. Ray is dom. stock	48/44-302	5-8-63		760			20 3.04				90 2.54			0.12				DNR	
				9-19-62	512							97 2.74							DNR
		5-8-63	585	16 0.80	14 1.14	74 3.22	1.0 0.03	0	126 2.07	10 0.21	0.1 0.00	0	49	330	62	97	0	USGS	

TABLE E-1

[illegible]

ANALYSES OF GROUND WATER  
1963

Owner and use	Slot well number and other number	Date sampled	Temp in °F	Specific conductance micro-mhos/cm at 25° C.	pH	Mineral constituents in parts per million							Total dissolved solids in ppm	Per cent total	Hardness as CaCO <sub>3</sub>		Analyzed by C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)			Nitrate (NO <sub>3</sub> )	Fluoride (F)		Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents <sup>a</sup>	Total	N.C.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
P. A. Gasser domestic and stock	NORSEM SN/44-14C1	9-18-62		230																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	pH	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent solids in ppm	Hardness as CaCO <sub>3</sub> Total N C ppm	Analyzed by c		
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (CO <sub>3</sub> ) (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Barium (Ba)					Silica (SiO <sub>2</sub> )	Other constituents <sup>d</sup>
	MIDREN																				
N. Kiser irrigation	5N/6W-24K1	10-24-62		205																	
		4-2-63		339	8.2	28 1.40	15 1.20	18 0.78	1.4 0.04	0 0.00	4.0 0.08	8.4 0.24	31 0.87	0 0.00	0 0.00	0 0.00	71	271	23	130	19
Comally domestic	5N/6W-23F1	10-26-62		505																	
		4-2-63		512	7.4	31 1.55	17 1.38	43 1.87	2.4 0.06	0 0.00	8.0 0.17	72 2.03	28 0.05	0 0.00	0 0.00	0 0.00	83	350	38	146	14
A. R. Johnson domestic and stock	6N/6W-15Q1	9-18-62		264																	
		5-8-63		259	8.1	14 0.70	58 0.48	30 1.30	4.5 0.12	0 0.00	14 0.29	80 2.23	11 0.18	0.2 0.01	0.1 0.01	56	200	50	59	0	USGS
N. Tarvold domestic	6N/6W-23N2	10-24-62		449																	
		4-3-63		500	8.4	11 0.55	10 0.81	74 3.20	1.2 0.31	4.2 0.14	0 0.00	76 2.15	0 0.00	1.0 0.05	1.3 0.06	64	350	66	68	0	LL
J. Stares domestic	6N/6W-28E1	10-24-62		442																	
		4-3-63		400	8.3	1.0 0.05	2.1 0.17	82 3.55	9.2 0.24	2.4 0.08	6.2 0.13	53 1.55	0 0.00	1.0 0.05	1.9 0.07	52	292	89	11	0	LL
A. Fastani domestic	7N/6W-30L1	9-18-62		104																	
		5-8-63		77	7.7	5.3 0.26	3.3 0.27	4.2 0.18	1.2 0.03	0 0.00	4.4 0.09	6.6 0.19	1.5 0.02	0.1 0.01	0 0.00	26	72	24	26	4	USGS
M. Wheeler domestic and stock	7N/4W-36B	9-18-62		522																	
		5-8-63		475	8.3	39 1.95	28 2.31	17 0.74	5.2 0.13	2 0.07	41 0.85	18 0.51	19 0.31	0.1 0.01	0.3 0.01	26	311	14	213	47	USGS
V. Studebaker domestic	8S/3W-12C1	3-8-63		422	7.8	14 0.70	13 1.08	52 2.28	7.0 0.18	0 0.00	0 0.00	13 0.37	2.5 0.04	0.4 0.02	0.4 0.02	100	347	56	89	0	DKR
	8N/4W-32L1	3-8-63		681	8.2	40 2.00	39 3.21	33 1.44	7.2 0.18	0 0.00	61 1.27	65 1.83	30 0.48	0.3 0.02	0.4 0.02	43	483	21	261	94	DKR



## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	pH	Mineral constituents in parts per million							Total dissolved solids in ppm	Per cent iron in ppm	Hardness as CaCO <sub>3</sub> Total ppm	Analyzed by	
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )					Chloride (Cl)
J. Alcouffe domestic and stock	ND6821																
	9N/86-31Q1	9-18-62		152				13 0.56						8.6 0.24		0.14	
	5-8-63		109	6.7	8.7 0.43	3.3 0.27	7.5 0.33	0.8 0.02	0 0.00	41 0.67	8.8 0.18	4.2 0.12	0.1 0.01	0	36	112 31 35 1	USGS
R. H. Archerd domestic	9N/74-23N1	9-18-62		927				165 7.18					186 5.24		12		DNR
	5-8-63		860	8.4	12 5.0	152 6.61	8.8 0.23	2 0.07	183 3.00	0.2 0.00	159 4.49	5.3 0.28	9.6 0.60	522 84 51 0	USGS		
Mrs. Taylor domestic	3N/1E-481	9-25-62		1400				114 4.96					257 7.25				DNR
	5-9-63		1210	8.5	53 2.64	65 5.34	1.4 0.04	15 0.50	292 4.79	17 0.35	197 5.36	0.8 0.11	0.6	28	730 35 399 135	USGS	
	5-9-63		1800				412 17.92					183 5.16					DNR
McDougal Livestock Co. stock	3N/1E-21D1	5-9-63		1770				307 13.35					280 7.90				DNR
	3N/1E-22F2	9-25-62		1650	8.5	24 1.21	27 2.21	1.4 0.04	15 0.50	476 7.80	63 1.33	232 6.35	0.4 0.02	3.4	17	1070 79 171 0	LL
McDougal Livestock Co. irrigation and stock	3N/1E-22F3	9-25-62		1710				300 13.05					247 6.96				DNR
	4N/1W-33A1	9-25-62		3630				336 14.33					825 23.26				DNR
Fish & Game Commission domestic		5-9-63		3600	8.6	55 2.75	51 4.15	2.3 0.06	24 0.80	543 8.90	142 2.97	860 24.25	0 0.00	14	19	2200 81 345 0	LL
																	DNR
Guy Stewart domestic	4N/1E-8F1	9-25-62		997				123 5.35					160 4.31				DNR
	5-9-63		2250	8.0	86 4.29	77 6.30	7.5 0.19	0 0.00	239 3.92	88 1.83	555 15.66	13 0.21	0.5 0.03	0.9	69	1570 56 530 334	USGS

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conduct- micro-mhos at 25° C	Mineral constituents in parts per million													Total dis- solved solids in ppm	Per- cent as CaCO <sub>3</sub>	Analyzed by			
					pH	Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)	Boron (B)	Silico (SiO <sub>2</sub> )				Other constituents		
						SULLEN-FAIRFIELD VALLEY (2-3) (CONT.)																	
W. F. Healy domestic Southern Pacific R.R. domestic	4N/24-401	5-8-63		1340	8.0	125 6.23	36 2.78	150 6.30	0.05 0.00	0 0.00	425 10.25	165 3.02	62 1.90	28 0.45	2.0 0.10		1.0	13	932	42	450	0	LL
	4N/24-502	9-25-62	378										42 1.18										
F. P. Smith domestic and stock	4N/24-1841	5-8-63	380	7.5	16 0.80	8.5 0.70	50 2.17	2.4 0.06	0 0.00	155 2.55	0 0.00	39 1.10	0 0.00	0 0.01	0.4 0.01	60		260	57	75	0	LL	
	4N/24-1362	9-25-62	1120				89 3.87					114 3.21											
D. R. Mangels Irrigation	5-8-63	5-8-63	1100	8.2	93 4.96	44 3.57	93 4.05	0.1 0.01	0 0.00	403 6.60	124 2.58	98 2.75	10 0.10	0.2 0.01	0.7 0.02	22		708	33	412	82	LL	
	9-25-62	9-25-62	1070				103 4.48					79 2.23											
H. J. Beck domestic	5-8-63	5-8-63	840	8.2	44 2.20	42 3.46	87 3.80	1.3 0.03	0 0.00	349 5.72	86 1.80	62 1.75	1.5 0.02	0.2 0.01	0.6 0.01	14		518	40	283	0	LL	
	9-25-62	9-25-62	772				71 3.09					50 1.41											
domestic	5-8-63	5-8-63	870	8.3	71 3.54	39 3.19	73 3.17	0.2 0.01	4.8 0.16	423 7.02	38 0.81	43 1.23	30 0.49	0.4 0.02	1.1 0.02	22		546	32	336	0	LL	
	9-25-62	9-25-62	1860				236 10.27					184 5.19											
Morris Tract domestic	5N/24-3481	5-8-63	1640	7.8	86 4.32	57 4.71	213 9.25	0.2 0.01	0 0.00	575 9.43	249 5.18	108 3.05	21 0.34	0.6 0.03	1.9 0.03	13		1080	51	451	0	LL	
	5N/24-3424	9-25-62	1500				202 8.79					58 1.64											
PITTSBURGH PLAIN (2-4)	5-8-63	5-8-63	1540	8.1	97 4.83	46 3.78	223 9.70	0.2 0.01	0 0.00	720 11.80	144 3.00	66 1.85	91 1.40	0.4 0.02	1.6 0.02	16		1060	53	430	0	LL	
Continental Can Co. domestic	2N/1E-782	6-6-63	3200	8.0	160 8.00	119 9.76	415 18.05	1.2 0.31	0 0.00	223 5.65	645 13.43	658 18.55	0 0.00	0.2 0.01	0.7 0.01	44		2160	50	888	706	DNR	
	2N/1E-22C1	6-6-63	1480	8.0			182 7.92			330 5.41		102 3.02											
Fibreboard Products domestic	2N/2E-20A1	6-6-63	68				175 7.60	4.8 0.12	6.0 0.20	293 4.80	140 2.93	236 6.66	27 0.14	0.1 0.01	0.6 0.01	44		891	50	372	122	DNR	

TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conduct- micro-mhos at 25° C	pH	Mineral constituents in parts per million—equivalents per million										Total dis- solved in ppm	Per- cent sodium in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by c		
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)	Boron (B)			Silica (SiO <sub>2</sub> )	Other constituents <sup>d</sup>		Total ppm	N.C. ppm
						CLAYTON VALLEY (2-5)																
G. Carletto irrigation and domestic	1N/1W-4A1	7-11-62		658	7.5	51	40	28	0.8	0	287	64	12	0.1	0.37	29	386	17	294	59	DMR	
						2.54	3.33	1.22	0.02	0.00	4.70	1.33	0.76	0.19	0.00							
S. H. Cowell Foundation industrial and domestic	1N/1W-4R1	7-11-62	65	1130	7.7	69	52	83	0.7	0	284	53	28	0.3	0.36	36	686	32	387	154	DMR	
						3.64	4.29	3.61	0.02	0.00	4.65	1.10	4.88	0.45	0.02							
Fred Baker domestic	2N/1W-3011	7-10-62		1120	7.5	93	65	62	0.7	0	498	124	21	0.2	0.53	34	698	21	501	93	DMR	
						4.64	5.37	2.70	0.02	0.00	8.16	2.58	0.34	0.01	0.01							
Jack Diabrow domestic	2N/1W-30K1	7-10-62		424	8.0	29	12	35	2.1	0	110	44	0.6	0.2	0.17	6.7	238	38	124	34	DMR	
						1.45	1.03	1.52	0.05	0.00	1.80	0.92	1.27	0.01	0.01							
Frank Dorville domestic	2N/1W-3101	7-10-62		898	8.3	84	46	34	0.7	0	279	72	88	0.2	0.26	31	553	16	400	171	DMR	
						4.19	3.80	1.48	0.02	0.00	4.57	1.50	2.48	0.77	0.01							
R. B. Ogilvie domestic	2N/2W-13P1	7-10-62		777	8.2	31	25	91	1.1	0	230	48	92	6.8	0.4	0.31	33	440	52	181	0	DMR
						1.55	2.07	3.96	0.03	0.00	3.77	1.00	2.74	0.11	0.02							
E. A. Bettinoia domestic	2N/2W-26B1	7-10-62		414	8.0	26	13	35	2.1	0	101	46	47	0.7	0.13	5.4	214	39	11	34	DMR	
						1.30	1.04	1.52	0.05	0.00	1.66	0.96	1.32	0.01	0.00							
J. D. Nallen domestic	2N/2W-36J1	7-11-62		1080	8.1	63	41	108	0.7	0	316	96	121	36	0.3	0.37	32	655	42	327	68	DMR
						3.14	3.39	4.70	0.02	0.00	5.18	2.00	3.41	0.58	0.02							
						YONKETO VALLEY (2-6)																
A. Sebastiani domestic	1N/1W-7K1	7-11-62		2140	8.0	111	70	266	1.6	0	442	491	15	0.5	1.2	24	1450	51	565	203	DMR	
						5.54	5.75	11.57	0.04	0.00	7.24	10.22	5.72	0.24	0.03							
M. E. Davis domestic	1N/1W-29C1	7-11-62		2080	7.9	127	74	224	1.1	0	504	235	31.6	0.9	1.1	20	1280	44	620	207	DMR	
						6.34	6.05	9.74	0.03	0.00	8.26	4.89	8.91	0.29	0.05							
Chester Hook Irrigation	1N/2W-11N1	7-11-62		984	8.2	37	31	129	2.6	0	364	23	12.6	0.2	0.3	1.6	555	56	220	0	DMR	
						1.85	2.55	5.61	0.07	0.00	5.96	0.48	3.55	0.00	0.02							
John Wells domestic and Irrigation	1N/2W-13P1	7-11-62		1560	7.7	107	77	129	0.7	0	594	119	151	0.4	0.5	1.8	947	32	586	99	DMR	
						5.34	6.37	5.61	0.02	0.00	9.74	2.48	4.26	0.66	0.03							
F. H. Donham domestic	2N/2W-27R1	7-10-62		1780	8.3	29	38	301	3.8	0	488	67	301	0.7	0.2	6.3	998	74	230	0	DMR	
						1.45	3.15	13.09	0.10	0.00	8.00	1.39	8.49	0.01	0.01							

TABLE E-1  
ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	pH	Mineral constituents in parts per million equivalents per million										Total dissolved solids in ppm	Percent total solids in ppm	Hardness as CaCO <sub>3</sub> in ppm	Analyzed by c				
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)					Barium (Ba)	Silica (SiO <sub>2</sub> )	Other constituents <sup>d</sup>	
	<u>NOBEM</u>					<u>YUCCA VALLEY (2-6) (Cont.)</u>																	
A. Busaglia domestic	2N/24-36E1	7-10-62			3220	7.9	236	156	220	0.9	0	57.6	41.4	536	136	0.5	1.9	26	2170	31	1230	759	OKR
					11.78	12.80	10.88	0.02	0.00	9.41	8.62	2.19	0.03										
domestic	2N/24-36E2	7-10-62			1650	7.9	119	93	106	1.4	0	61.6	36	24.1	1.9	0.2	0.50	25	956	25	681	178	OKR
					5.34	7.07	4.61	0.04	0.00	10.06	0.75	6.80	0.03	0.01									
						<u>EAST BAY AREA, PT. SANTA CLARA VALLEY (2-9)</u>																	
Manass Block Tanning Co. Industrial	1S/24-4A1	6-17-63	67		1400	8.1	89	67	100	1.2	0	332	101	217	24	0.2	0.1	24	868	30	496	224	USGS
					6.44	5.48	4.35	0.03	0.00	5.44	2.10	6.12	0.39	0.01									
Red Star Yeast Co. Industrial	1S/24-3A2	6-17-63	68		994	8.6	36	28	129	6.8	8	256	18	160	8.9	0.0	0.1	42	558	57	206	0	USGS
					1.80	2.32	5.61	0.17	0.27	4.20	0.37	4.51	0.14	0.09									
General Metals Industrial	2S/24-21J1	6-18-63	68		6240	7.8	549	251	328	16	0	66	158	2020	18	0.0	0.3	36	3770	23	2400	1350	USGS
					27.00	20.08	14.27	0.41	0.00	1.05	3.29	36.98	0.29	0.00									
A. Ratto Irrigation	2S/24-28G1	6-18-63	66		777	8.3	53	19	86	4.3	2	260	46	90	0.5	0.0	0.3	37	454	46	210	0	USGS
					2.64	1.56	3.74	0.11	0.07	4.26	0.96	2.34	0.01	0.00									
Alameda Municipal Golf Course Irrigation	2S/24-30A	6-18-63			1380	8.3	115	35	103	7.8	2	242	35	292	0.9	0.0	0.3	36	836	34	430	228	USGS
					5.74	2.86	4.48	0.20	0.07	3.87	0.73	8.24	0.01	0.00									
Soares Irrigation	2S/24-30B2	6-18-63			4330	7.9	376	149	254	16	0	108	130	1290	0.9	0.0	0.3	36	2560	26	1550	1460	USGS
					18.76	12.24	11.05	0.41	0.00	1.77	2.71	36.39	0.01	0.00									
Hohener Packing Co. domestic and Industrial	2S/24-33B3	6-18-63			609	8.6	35	17	75	5.2	14	288	25	28	4.6	0.0	0.4	35	375	50	158	0	USGS
					1.75	1.41	3.26	0.13	0.47	4.72	0.52	0.79	0.07	0.00									
R. A. Zobel Irrigation	2S/24-34A2	6-18-63	65		795	8.5	70	38	44	2.7	14	284	55	43	58	0.0	0.3	30	501	22	332	76	USGS
					3.49	3.15	1.91	0.07	0.27	4.65	1.15	1.21	0.94	0.09									
J. A. Joellich domestic	2S/24-34C3	6-18-63			575	8.6	41	20	61	3.6	12	284	22	27	2.1	0.0	0.3	23	343	41	184	0	USGS
					2.05	1.63	2.65	0.09	0.40	4.65	0.76	0.76	0.03	0.00									
Alameda Naval Air Station municipal	2S/24-3E1	6-18-63	69		765	8.7	35	18	100	1.4	12	266	32	86	2.1	0.1	0.2	29	468	57	161	0	USGS
					1.75	1.47	4.35	0.06	0.60	4.36	0.67	2.43	0.03	0.01									
Todd Ship Yards Industrial	2S/24-3F1	6-18-63	69		857	8.6	38	22	105	1.7	10	227	20	137	1.9	0.1	0.2	28	479	55	187	0	USGS
					1.90	1.84	4.57	0.06	0.33	3.72	0.42	3.86	0.03	0.01									

TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium in ppm	Headpress as CaCO <sub>3</sub>		Analyzed by c		
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)			Barium (Ba)	Silica (SiO <sub>2</sub> )		Other constituents <sup>d</sup>	Total N.C. ppm
						EAST BAY AREA OF SANTA CARA VALLEY (CONT.)																
	NR624																					
Alameda High School domestic and irrigation	2S/44-12R1	6-18-63	67	379	8.5	23 1.15	11 0.91	38 1.65	4.0 0.10	2 0.07	148 2.43	13 0.27	38 1.07	1.0 0.02	0.1 0.01	0.1	28	218	43	103	0	USGS
Ratio	2S/44-25A1	6-18-63		816	8.8	63 2.13	15 1.21	116 5.05	2.2 0.06	19 0.63	265 4.34	46 0.96	91 2.57	1.9 0.03	0.1 0.01	0.3	26	470	60	168	0	USGS
Boyside Nursery irrigation	3S/24-721	6-20-63	65	787	8.4	30 1.50	26 2.98	70 3.04	4.2 0.11	6 0.20	142 2.33	95 1.98	83 2.34	51 0.82	0.0 0.00	0.4	39	496	40	224	98	USGS
Kruger & Sons Industrial	3S/24-1906	6-20-63	64	1180	8.1	101 5.08	37 3.02	85 3.70	6.6 0.17	0	288 4.72	98 2.06	150 4.23	39 0.63	0.0 0.00	0.3	31	704	31	404	148	USGS
Al Matcos Irrigation	3S/24-30R14	6-20-63		1360	8.3	160 7.01	41 3.40	95 4.13	0.8 0.02	7.2 0.24	489 8.01	91 1.91	125 3.32	54 0.87	0.2 0.01	0.5	23	764	28	521	109	LL
Mount Eden Nursery Co., domestic and irrigation	3S/24-3203	6-20-63	74	735	8.2	28 1.38	8.0 0.68	135 5.87	2.5 0.06	0	348 4.06	59 1.23	91 2.55	0.0 0.00	0.1 0.01	0.5	22	446	74	102	0	LL
Avonsino Mortenson Co., irrigation	3S/34-1C3	6-20-63		1000	8.3	38 1.90	20 1.62	148 6.44	7.2 0.18	2 0.07	316 5.31	54 1.12	116 3.27	0.6 0.01	0.1 0.01	0.2	37	585	64	176	0	USGS
Troyon Powder Industrial	3S/34-11Q1	6-20-63	66	1200	8.2	82 4.09	23 0.19	172 7.48	3.0 0.08	0	249 4.08	37 0.77	245 6.91	0.4 0.01	0.2 0.01	0.54	13	626	63	214	10	DMR
Umanella Irrigation	3S/34-1202	6-20-63		1900	8.2	204 10.18	23 1.93	216 9.40	1.1 0.03	0	638 4.37	210 4.07	187 5.28	85 2.67	0.2 0.04	1.9	26	1200	44	606	83	DMR
J. Bart domestic and stock	3S/34-2402	6-20-63		2050	7.8	155 7.76	94 7.72	195 8.47	1.0 0.03	0	454 7.25	122 2.35	406 11.41	1.1 2.27	0.2 0.01	0.6	24	1390	35	774	402	LL
Salinas Bros. Irrigation	4S/14-7102	5-14-63		858									58 1.64								DMR	
Tudera	4S/14-7181	5-17-63		978									79 2.23	63 0.69							DMR	
Deeto Masonic Home domestic and irrigation	4S/14-7185	5-7-63		827									54 1.32								DMR	
M. Frates Irrigation	4S/14-1714	9-6-62		1140	8.2	115 5.74	34 3.65	64 2.78	2.3 0.06	0	328 5.38	107 2.23	150 4.23	23 0.37	0.2 0.01	0.46	20	671	23	470	201	DMR
		5-10-63		1420									235 6.35								DMR	

TABLE E-1  
ANALYSES OF GROUND WATER  
1963

Owner and use	Site well number and other number	Date sampled	Temp in °F	Specific conductance in mhos at 25° C	pH	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per cent sodium	Headness as CaCO <sub>3</sub> Total N.C. ppm	Analyzed by	
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)					Silica (SiO <sub>2</sub> )
	200601																			
J. N. Enos domestic and irrigation	4S/1W-1801	9-62		709	8.2	35 1.75	40 3.33	1.7 0.04	0 0.00	191 3.13	68 1.42	76 2.14	27 0.44	0.1 0.01	0.2 2.1	434	31	254	97	USGS
	5-7-63			1060								96 2.71								DNR
Pacific States Steel Company Industrial	4S/1W-1801	5-7-63		1550								265 6.91								DNR
American Forge Co. Industrial	4S/1W-1803	5-7-63		2430								635 17.91								DNR
N. Rose domestic and irrigation	4S/1W-1807	9-62		3980	7.5	374 18.66	184 15.14	4.1 0.10	0 0.00	51 0.84	23 0.48	1280 36.11	9.3 0.15	0.3 0.02	0.3 1.7	2500	12	1690	1650	USGS
	5-7-63			4830								1660 41.19								DNR
Santa Cruz-Portland Cement Co. irrigation	4S/1W-2002	9-62		1290	8.5	135 6.74	50 4.13	2.4 0.06	8 0.27	255 4.18	66 1.37	246 6.94	12 0.19	0.1 0.00	0.44 1.7	695	15	544	322	DNR
5-9-63				804								127 3.58								DNR
5-17-63	4S/1W-20E1			720								84 2.37	4.4 0.07							DNR
9-6-62	4S/1W-21F2			688	7.7	57 2.84	27 2.19	2.1 0.05	0 0.00	230 3.77	67 1.39	42 1.75	3.6 0.06	0.3 0.02	0.69 1.3	431	27	252	63	DNR
Citizens Utilities Co. of California municipal		12-5-62	63	646	7.9	52 2.59	22 1.85	2.3 0.06	0 0.00	202 3.31	49 1.02	72 2.03	2.4 0.04	0.3 0.02	0.63 1.5	371	34	222	56	DNR

TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	Site well number and other number	Date sampled	Temp in °F	Specific conductance in micro-mhos at 25° C	pH	Mineral constituents in parts per million											Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub> ppm		Analyzed by C					
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)		Silica (SiO <sub>2</sub> )	Other constituents <sup>a</sup>						
Citizens Utilities Co. of California municipal	NDB&N 4S/1W-21F2	3-7-63	65	757	8.3	60 2.99	28 2.30	53 2.30	2.2 0.06	0.00 0.00	2.20 3.60	67 1.39	88 2.48	8.4 0.14	0.3 0.02	0.59	1.7	Cr <sup>+6</sup> 0.00 Al 0.00 As 0.00 Cu 0.01 Pb 0.00 Mn 0.00 Zn 0.00 T.O. <sub>2</sub> 1 Se 0.00 Fe 0.00 (Total) Phenols 0.000 ABS 0.00	503	30	265	85	DNR		
						790																			DNR
						720	8.1	3.84 1.45	48 2.09	2.3 0.06	0.00 0.00	2.27 3.72	77 1.60	68 1.92	6.2 0.10	0.3 0.02	0.58	1.6	Cr <sup>+6</sup> 0.00 ABS 0.00 Al 0.00 As 0.00 Cu 0.00 Pb 0.00 Mn 0.00 Zn 0.02 T.O. <sub>2</sub> 1 Se 0.00 Fe 0.00 (Total) Phenols 0.000	412	28	265	79	DNR	
						702	7.8	61 3.04	42 1.83	1.9 0.05	0.00 0.00	2.54 4.16	85 1.77	48 1.35	1.7 0.03	0.2 0.01	0.60	1.6	Cr <sup>+6</sup> 0.00 Al 0.10 As 0.00 Cu 0.00 Pb 0.00 Mn 0.00 Zn 0.00 T.O. <sub>2</sub> 50 Se 0.00 Fe 0.00 (Total) Phenols 0.000	431	25	269	61	DNR	
						711	8.1	64 3.19	44 1.91	2.1 0.05	0.00 0.00	2.66 4.36	85 1.77	49 1.38	1.7 0.03	0.3 0.02	0.62	1.8	Cr <sup>+6</sup> 0.00 Al 0.00 As 0.00 Pb 0.00 Mn 0.00 Zn 0.09 Se 0.00 T.O. <sub>2</sub> 1 Cu 0.00 Fe 0.00 (Total) Phenols 0.000	421	26	276	58	DNR	
H. J. Kaiser Co. Industrial	4S/1W-21M1	9-6-62	702	7.8	8.1	61 3.04	28 2.33	42 1.83	1.9 0.05	0.00 0.00	2.54 4.16	85 1.77	48 1.35	1.7 0.03	0.2 0.01	0.60	1.6	Cr <sup>+6</sup> 0.00 Al 0.10 As 0.00 Cu 0.00 Pb 0.00 Mn 0.00 Zn 0.00 T.O. <sub>2</sub> 50 Se 0.00 Fe 0.00 (Total) Phenols 0.000	431	25	269	61	DNR		
						644	8.2	69 2.44	45 1.96	1.8 0.05	0.00 0.00	2.22 3.66	82 1.71	54 1.52	1.9 0.03	0.1 0.00	0.58	1.6	Cr <sup>+6</sup> 0.00 Al 0.00 As 0.00 Cu 0.00 Pb 0.00 Mn 0.00 Zn 0.00 T.O. <sub>2</sub> 2 Se 0.00 Cr 0.01 (Total) ABS 0.00	391	24	243	61	DNR	
		3-7-63	64	644	8.2	69 2.44	29 2.42	45 1.96	1.8 0.05	0.00 0.00	2.22 3.66	82 1.71	54 1.52	1.9 0.03	0.1 0.00	0.58	1.6	Cr <sup>+6</sup> 0.00 Al 0.00 As 0.00 Cu 0.00 Pb 0.00 Mn 0.00 Zn 0.00 T.O. <sub>2</sub> 2 Se 0.00 Cr 0.01 (Total) ABS 0.00	391	24	243	61	DNR		



ANALYSES OF GROUND WATER  
1963E-20

TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos/cm at 25° C)	pH	Mineral constituents in parts per million												Total dissolved solids in ppm	Per cent total in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by c	
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )			Other constituents <sup>d</sup>	Total		N.C.
	202624					EAST BAY AREA OF SANTA CLARA VALLEY (249) (Cont.)																	
A.C.W.D. municipal	4S/1W-28D9	5-17-63		770																DNR			
Washington Township Hospital and hospital	4S/1W-28F5	9-62		436	8.3	28	16	44	1.8	4	182	38	26	2.4	0.3	0.4	22	ABS 0.0		USGS			
						1.40	1.16	1.91	0.05	0.13	2.98	0.79	0.73	0.04	0.02					DNR			
		5-63		562																DNR			
A.C.W.D. municipal	4S/1W-28L1	5-17-63		718																DNR			
C. Caldeira domestic	4S/1W-29J8	9-62		2630	7.7	156	108	180	3.5	0	304	95	619	31	0.1	0.8	19	ABS 0.00		USGS			
						7.78	8.92	7.83	0.09	0.00	4.98	1.98	17.46	0.50	0.01					DNR			
		5-8-63		3250																			
A.C.W.D. municipal	4S/1W-29J12	9-62		835	8.1	63	31	45	2.0	0	149	50	155	5.7	0.0	0.4	25	ABS 0.00		USGS			
						3.14	2.54	1.96	0.05	0.00	2.44	1.04	4.37	0.09	0.00								
		5-7-63		1160																			
A.C.W.D. municipal	4S/1W-30E3	9-62		735	8.4	19	7.7	131	1.8	8	208	54	90	1.2	0.3	0.4	21	ABS 0.0		USGS			
						0.95	0.63	3.70	0.05	0.27	3.41	1.12	2.54	0.02	0.02								
		5-7-63		778																DNR			
W. E. Hutchins domestic	4S/1W-31A2	5-8-63		1690																DNR			
A.C.W.D. municipal	4S/1W-31B3	9-62		677	8.1	42	18	65	1.6	0	132	49	116	3.7	0.3	0.4	28	ABS 0.0		USGS			
						2.70	1.48	2.83	0.06	0.00	2.16	1.02	3.27	0.06	0.02								
		5-7-63		811																DNR			
F. Bechart domestic and irrigation	4S/1W-32A5	5-8-63		2220																DNR			
A.C.W.D. municipal	4S/1W-32P1	5-17-63		1100																DNR			

TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance in micro-mhos at 25° C.	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per- cent sulfate in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by					
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluor- ide (F)			Boron (B)	Silico (SiO <sub>2</sub> )		Other constituents <sup>d</sup>	Total N	C pam		
	Y082N				EAST BAY AREA OF SANTA CLARA VALLEY (2-49) (Cont.)																			
J. Planetta irrigation	4S/14-3301	9-62		4120	7.5	4.83	1.19	1.37	4.2	0	.92	.75	12.50	2.9	0.1	0.6	2.6	ABS 0.00		2470	15	1690	1620	USGS
						24.10	9.78	5.96	0.11	0.00	1.91	1.96	35.26	0.47	0.01									
Enrico and Sidini irrigation	4S/14-3303	9-62		1170	8.1	24	54	139	3.4	0	286	8.3	17.3	0.2	0.8	2.5	ABS 0.0		660	52	280	45	USGS	
						1.20	4.40	6.05	0.09	0.00	4.69	1.73	4.88	0.44	0.01									
R. Clarkes domestic and irrigation	4S/14-3301	5-13-63		1450																			DNR	
		9-62		1000	8.5	9.6	52	139	3.4	15	286	84	99	0.2	0.9	2.6	ABS 0.0		583	56	237	0	USGS	
						1.90	2.84	6.05	0.09	0.30	4.69	1.75	2.79	0.81	0.01									
B. Rose domestic and irrigation	4S/14-3404	5-8-63		1430																			DNR	
		9-62		1070	8.5	71	43	86	1.8	14	294	29	140	52	0.3	0.2	27		612	35	352	88	USGS	
						3.34	3.91	3.74	0.05	0.47	4.82	0.60	3.95	0.84	0.02									
A.C.D. municipal	4S/14-3402	5-8-63		1250																			DNR	
		9-62		521	8.3	16	17	79	1.7	5	244	19	37	12	0.3	0.2	23	ABS 0.0		310	60	110	0	USGS
						0.80	1.40	3.44	0.04	0.17	4.00	0.40	1.04	0.19	0.02									
A.C.D. municipal	4S/14-3503	5-7-63		680																			DNR	
		9-62		640	8.3	22	18	99	1.7	5	296	21	40	8.1	0.2	0.3	26	ABS 0.0		370	62	129	0	USGS
						1.10	1.49	4.31	0.04	0.17	5.34	0.44	1.13	0.13	0.01									
Andrada domestic and irrigation	4S/24-381	5-7-63		709																			DNR	
		9-62		579	8.5	44	8	81	1.5	10	289	41	18	2.0	0.0	0.2	25	ABS 0.0		359	55	144	0	USGS
						1.80	1.08	3.92	0.04	0.33	4.74	0.85	0.91	0.00										
Holly Sugar Refinery Industrial	4S/24-1001	5-7-63		575																			DNR	
		9-62		565	8.2	30	13	68	2.3	0	172	35	66	4.1	0.2	0.2	22	ABS 0.0		313	54	130	0	USGS
						1.50	1.10	2.96	0.06	0.00	2.82	0.73	1.86	0.07	0.01									
		5-9-63		661																			DNR	

TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	Site well number and other number	Date sampled	Temp. in °F	Specific conductance (micro-mhos at 25° C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent total dissolved solids in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by c			
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)			Boron (B)	Silica (SiO <sub>2</sub> )		Other constituents <sup>d</sup>	Total	N/C ppm
	<u>ND824</u>																					
A.C.H.D. municipal	4S/24-1086	9-62		1810	97 4.84	34 2.80	204 8.87	3.6 0.09	0 0.00	108 1.77	53 1.10	495 13.96	2.4 0.04	0.2 0.01		22	ABS 0.0	1170	53	382	293	USGS
		5-7-63		1820									451 12.72									DNR
Scotto Bros. irrigation and domestic	4S/24-1042	9-62		2480	175 8.73	138 11.37	137 5.96	3.3 0.08	0 0.00	165 2.38	364 7.58	562 15.85	15 0.24	0.2 0.01	0.6	21	ABS 0.0	1870	23	1000	881	USGS
		5-7-63		2680									501 14.13									DNR
H. Andrade domestic and irrigation	4S/24-1043	5-7-63		2280								308 8.69										DNR
		5-7-63		755									39 1.10	11 0.18								DNR
J. C. Whipple abandoned	4S/24-1102	5-7-63		823								45 1.27	16 0.26									DNR
		5-7-63		775									45 1.27	5.0 0.08								DNR
N. Faria domestic	4S/24-1111	5-10-63		1290	99 4.96	54 4.46	94 4.09	1.7 0.04	0 0.00	314 5.15	102 2.12	112 3.16	184 2.97	0.4 0.02	0.4	22	ABS 0.0	884	30	470	213	USGS
		9-62		1430									113 3.19	97 1.36								DNR
H. Datta domestic and irrigation	4S/24-1105	5-7-63		1450								184 5.19	44 0.71									DNR
		5-7-63		617									45 1.27	2.0 0.03								DNR
J. Goularte domestic	4S/24-11812	5-7-63		1130								98 2.76	33 0.85									DNR
		5-17-63		893									68 1.92	39 0.63								DNR
A.C.H.O. municipal	4S/24-1201	5-10-63		4550	7.7 18.96	211 17.36	268 11.66	4.4 0.11	0 0.00	88 1.44	444 9.24	1290 36.39	8.8 0.14	0.2 0.01	0.4	23		3170	24	1820	1750	USGS
		10-2-62																				
M. S. Santos irrigation	4S/24-1202	5-10-63																				
		10-2-62																				
T. E. Harvey irrigation	4S/24-1401	10-2-62																				

TABLE E-1

[illegible]

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium in ppm	Hardness as CaCO <sub>3</sub> Total N.C. ppm	Analyzed by c	
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)					Boron (B)
	<u>NOBAG</u>				EAST BAY AREA OF SANTA CLARA VALLEY (2-9) (Cont.)														
H. H. and W. D. Patterson Irrigation	4S/24-26A1	9-62	1020	8.0	104 5.19	27 2.22	64 2.78	2.4 0.06	0 0.00	217 3.56	54 1.12	193 5.44	0.2 0.01	0.40	22	ABS 0.0	592 27 371 193	DMR	
		5-13-63	1120									201 5.67						DMR	
H. H. and W. D. Patterson domestic and irrigation	4S/24-27L1	5-8-63	586									30 0.85						DMR	
		5-9-63	916									132 3.72						DMR	
A. C. & D. J. Milani municipal	5S/14-40L	9-62	571	8.4	15 0.75	4.6 0.38	114 4.96	1.8 0.05	10 0.33	269 4.41	39 0.81	20 0.56	0.2 0.01	0.3	27	ABS 0.0	364 81 59 0	USGS	
		5-7-63	589									20 0.56						DMR	
J. F. Trindade Irrigation and domestic	5S/14-60L	9-62	1850	8.0	156 7.78	60 4.95	139 6.05	3.0 0.08	0 0.00	269 4.41	116 2.42	422 11.91	1.3 0.02	0.2 0.01	2.1	2.0	1030 32 637 417	DMR	
		5-9-63	1930									451 12.72						DMR	
L. Milani Irrigation and domestic	5S/14-66L	9-62	557	8.8	32 1.60	9.4 0.77	90 3.92	1.8 0.05	19 0.63	253 4.13	29 0.60	28 0.79	11 0.18	0.3 0.02	0.2	ABS 0.0	360 61 119 0	USGS	
		5-8-63	3400									980 27.60						DMR	
Alameda County East Bay Title Insurance Co A. F. Brosius Irrigation and domestic	5S/14-97L	5-9-63	1410	7.9	112 5.59	48 3.94	108 4.70	2.4 0.06	0 0.00	453 7.42	37 0.77	226 6.37	0.2 0.00	0.3 0.02	0.46	23	792 33 477 106	DMR	
		9-62	840	8.5	57 2.84	33 2.71	76 3.31	3.2 0.08	9 0.30	312 5.11	49 1.02	79 2.23	23 0.37	0.3 0.01	0.3	26	482 37 278 7	USGS	
W. B. Brinker Irrigation	5S/14-98L	5-8-63	910									78 2.20						DMR	
		9-62	1260	8.2	86 4.29	40 3.31	106 4.61	4.9 0.13	0 0.00	242 3.97	28 0.58	265 7.48	5.3 0.09	0.2 0.01	0.2	ABS 0.0	794 37 380 182	USGS	
		5-8-63	1360									295 8.32						DMR	

ANALYSES OF GROUND WATER  
1963E-26



TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance in micro-mhos at 25° C	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by C	
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)			Silica (SiO <sub>2</sub> )	Total		NC
						SOUTH BAY AREA OF SANTA CLARA VALLEY (2-9) (G.M.T.)															
T. A. Wilcox Irrigation	65/1W-2601	8-62	400	8.5	35 1.74	7.7 0.64	49 2.13	0.7 0.02	6.0 0.20	21 0.85	11 0.45	2.9 0.05	0.1 0.01	0.2	21		274	47	119	0	DHR
	65/1W-2881	7-25-62	67	430	8.2	46 2.29	13 1.11	28 1.20	1.3 0.03	0 0.00	16 0.94	5.0 0.08	0.2 0.01	0.2	31		290	26	170	17	DHR
G. H. Pukamoto domestic and irrigation	65/1W-29C1	7-26-62	66	550	8.6	51 2.53	21 1.69	40 1.75	0.9 0.03	12 0.40	22 0.46	3.9 0.06	0.1 0.01	0.2	20		316	29	211	0	DHR
	65/2W-9H1	8-27-62	70	530	8.6	34 1.71	12 1.00	64 2.60	1.2 0.31	16 0.54	19 0.39	0.0 0.00	0.1 0.01	0.3	22		342	48	135	0	DHR
J. Joaquin	65/2W-9K2	7-27-62	72	520	8.2	47 2.34	17 1.35	52 2.25	1.1 0.03	0 0.00	31 0.65	0.0 0.00	0.1 0.01	0.2	22		340	38	185	0	DHR
	65/2W-16R1	7-27-62	69	600	8.2	37 2.84	30 2.46	33 1.53	1.2 0.03	0 0.00	43 1.89	16 0.23	0.1 0.01	0.1	28		398	21	265	100	DHR
California Water Service Company municipal	65/2W-20N1	8-27-62	70	630	8.1	46 2.30	27 2.22	58 2.52	1.1 0.03	0 0.00	14 0.31	37 0.60	0.1 0.01	24	24		400	36	226	0	DHR
	65/2W-24H3	8-24-62	71	460	8.4	30 1.52	17 1.40	47 2.05	0.8 0.02	3.6 0.12	28 0.59	0.0 0.00	0.1 0.01	0.2	25		310	41	146	0	DHR
Slonaker Irrigation and domestic	65/2W-2902	8-27-62	66	720	8.2	68 3.42	29 2.36	49 2.13	1.2 0.03	324 0.00	45 0.49	4.5 0.73	0.1 0.01	0.1	28		446	27	289	24	DHR
	65/2W-34N1	8-28-62	70	500	8.6	32 2.61	26 2.10	24 1.05	0.7 0.02	12 0.40	14 0.28	15 0.24	0.1 0.01	0.1	24		314	18	235	8	DHR
O. P. Gluhlich Irrigation	65/2W-36H2	7-26-62	68	580	8.0	61 3.03	24 1.96	35 1.50	1.5 0.04	0 0.00	52 1.09	1.9 0.30	0.2 0.01	0.2	26		404	23	250	73	DHR
	75/1W-5P1	7-26-62	71	440	8.2	38 1.90	17 1.42	30 1.30	1.1 0.03	0 0.00	33 0.68	12 0.19	0.1 0.01	0.2	22		290	28	166	11	DHR

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by c						
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)		Boron (B)	Silica (SiO <sub>2</sub> )		Other constituents	Total	N/C ppm			
	HUBBARD				LIVERMORE VALLEY (2-10)																			
T. P. Bishop Co. Irrigation	2S/1A-22A1	6-21-63	66	856	8.1	30	17	118	2.3	0	173	12	168	1.5	0.2	0.3	29	ABS 0.0	458	63	145	3	WAR	
City of Livermore Industrial and Stock	2S/2E-27K1	6-24-63		6700	8.1	346	38	1100	2.8	0	220	34	2250	3.5	1.0	0.4	36	27	4070	70	100.0	840	DWR	
Henry Garaventa stock	2S/2E-35C1	6-24-63		4500	8.9	24	42	920	2.9	96	494	105	1140	11	1.5	0.6	36	8.7	2680	89	232	0	USGS	
F. Gastanich domestic	2S/2E-35G2	6-24-63		2640	8.4	29	48	480	1.6	1	289	78	640	22	1.2	0.8	6.5	22	1450	79	270	31	DWR	
E. B. and J. Nevin domestic	3S/1A-1G1	6-21-63	62	920	8.3	56	40	79	1.4	3	286	111	92	3.1	0.6	0.05	0.2	14	549	36	304	65	USGS	
R. M. King Abandoned	3S/1A-12G2	3-6-63	59	1040	8.3	107	49	54	0.5	0	375	149	93	8.1	0.3	0.13	0.20	27	679	20	471	163	DWR	
Mrs. Berwick	3S/1E-1F1	2-28-63		674	8.3	11	2.8	137	1.0	0	277	29	55	4.8	0.3	0.08	0.47	28	429	88	39	0	DWR	
L. Lupton	3S/1E-1K1	2-28-63	68	561	7.9	41	19	51	2.3	0	280	39	20	0.6	0.1	0.02	0.36	15	337	38	180	0	DWR	
Imman School	3S/1E-1H1	2-28-63	68	1440	8.3	35	26	258	1.7	0	524	68	181	12	0.5	0.19	1.6	27	849	74	196	0	DWR	
Alameda County domestic	3S/1E-3Q1	6-21-63		1270	8.4	62	42	163	1.4	5	442	72	160	28	0.5	0.05	1.6	26	767	52	327	0	DWR	
Volk-McLain	3S/1E-7E2	2-26-63		1070	8.1	84	26	114	1.9	0	454	50	102	1.5	0.2	0.02	0.39	27	650	44	319	0	DWR	
U. S. Air Force domestic and Irrigation	3S/1E-8H3	6-21-63	63	664	8.7	18	54	36	1.8	14	204	56	68	11	0.6	0.18	0.3	21	376	22	269	79	USGS	
Silva Bros.	3S/1E-9A1	7-3-62		1550	8.3	50	63	202	1.9	0	560	85	178	30	0.3	0.48	2.2	29	943	53	383	0	DWR	
	6-24-63			1440	8.5	55	61	186	2.1	17	473	88	172	31	0.4	4.85	2.8	25		861	51	389	0	DWR
Rose Brothers	3S/1E-9D1	6-24-63		4570	8.0	195	248	412	3.3	0	318	503	1100	26	0.1	31.03	3.4	30	2830	37	1510	1249	DWR	

ANALYSES OF GROUND WATER  
1963E-29

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by c					
					Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Bicar-bonate (HCO <sub>3</sub> )	Sul-fate (SO <sub>4</sub> )	Chlo-ride (Cl)	Ni-trate (NO <sub>3</sub> )	Fluo-ride (F)	Boron (B)		Silica (SiO <sub>2</sub> )	Other constituents <sup>a</sup>		Total ppm	N.C. ppm			
	<u>NDBEM</u>				<u>LIVERMORE VALLEY (2-10) (Cont.)</u>																		
R. H. Dana	35/1E-1803	2-26-63	55	750	7.4	71	31	4.0	0.6	0	285	76	34	0.2	0.19	23	ABS 0.0 PO <sub>4</sub> 0.06 (Total)	509	22	305	71	DMR	
City of Pleasanton	35/1E-2021	3-5-63	61	1400	7.9	89	73	11.6	2.2	0	532	70	151	0.64	0.64	25	ABS 0.0 PO <sub>4</sub> 0.15 (Total)	813	32	522	86	DMR	
City of Pleasanton	35/1E-2001	3-5-63	59	1610	7.8	88	86	13.7	1.8	0	603	75	179	0.88	0.84	22	ABS 0.0	940	34	572	78	DMR	
City of Pleasanton abandoned	35/1E-2002	9-5-62		1530	7.6	82	85	13.9	0.6	0	760	55	137	0.4	0.3	0.9	ABS 0.00 PO <sub>4</sub> 0.00 (Total)	897 <sup>a</sup>	35	566	0	DMR	
	3-4-63			1480	7.7	91	82	13.3	0.6	0	724	59	123	0.6	0.89	16	ABS 0.4 PO <sub>4</sub> 0.02 (Total)	856	34	563	0	DMR	
Albert Vomini domestic	35/1E-29A2	2-26-63	62	1490	7.6	76	51	166	1.3	0	381	71	203	1.02	0.4	0.64	21	1010	47	401	89	DMR	
City of Pleasanton abandoned	35/1E-29B1	9-5-62		1360	8.2	28	79	158	7.5	0	605	14	158	0.2	0.8	8.9	ABS 0.00 PO <sub>4</sub> 0.01 (Total)	768 <sup>a</sup>	46	394	0	DMR	
	3-5-63	61	1650	7.9	86	87	158	1.5	0	455	70	188	66	0.3	0.72	27	ABS 0.1 PO <sub>4</sub> 0.01 (Total)	958	37	572	35	DMR	
Mrs. Cohen	35/1E-32K2	2-26-63	62	1500	8.0	114	65	114	3.4	0	511	108	193	1.7	0.2	3.8	ABS 0.0 PO <sub>4</sub> 0.00 (Total)	1030	31	553	134	DMR	
California Water Service municipal	35/2E-4H1	6-24-63		671	8.3	34	43	46	1.5	18	247	34	52	28	0.2	0.4	21	ABS 0.0	392	28	260	28	USGS
J. Schenone domestic and irrigation	35/2E-4H1	6-24-63		2000	8.5	37	104	230	1.8	6	356	406	750	1.9	0.5	5.0	ABS 0.0	1300	51	522	210	USGS	
						9.54	9.54	10.88	0.05	0.20	5.83	8.45	7.05	0.03	0.03								
Randolfo domestic	35/2E-6P1	3-7-63	67	951	7.9	64	64	43	2.3	0	354	56	105	28	0.1	0.60	26	ABS 0.00	557	18	424	134	DMR
H. R. Johnson	35/2E-7C1	3-15-63		1520	7.7	43	95	114	2.9	0	489	42	201	12	0.1	0.95	27		896	30	498	97	DMR
H. L. Hageman irrigation	35/2E-7K1	6-24-63		702	8.8	45	56	26	1.9	20	300	41	40	27	0.2	0.2	22	ABS 0.0	416	14	344	65	USGS
California Water Service Co. municipal	35/2E-8H1	6-24-63		681	8.8	34	44	45	1.6	20	247	33	52	28	0.2	0.5	1.8	ABS 0.0	406	27	265	30	USGS

TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance in micro-mhos at 25° C	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent total solids in ppm	Hardness as CaCO <sub>3</sub> Total ppm	N.C. ppm	Analyzed by				
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)						Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents	
	ND62M																							
Anling-DeVore Nursery Irrigation B. G. Vond Irrigation I. Amarel Irrigation	3S/2E-10H1	6-25-63		773	8.3	79 3.96	12 1.02	62 2.70	1.9 0.05	0 0.00	2.60 4.26	4.6 0.96	74 2.09	29 0.47	0.4 0.02	1.1	30	ABS 0.0		431	35	248	35	DMR
	3S/2E-29H1	6-24-63		784	8.3	60 2.99	36 2.96	49 2.13	1.8 0.05	0 0.00	2.79 4.57	63 1.31	69 1.86	22 0.35	0.2 0.01	0.4	22	ABS 0.0		469	26	298	69	DMR
	3S/3E-19C1	6-25-63		1610	8.5	30 1.30	46 3.81	258 11.22	2.4 0.06	13 0.43	502 8.23	99 2.06	219 6.18	1.5 0.02	0.6 0.03	6.5	25	ABS 0.0		959	68	266	0	DMR

TABLE E-1

Owner and use	Site well number and other number	Date sampled	Temp in °F	Specific conduct- (micro-mhos of 25° C)	pH	Mineral constituents in parts per million										Total dis- solved solid in ppm	Per- cent of total dis- solved solid in ppm	Head- press at CaCO <sub>3</sub>	Analyzed by c
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- tro- ride (NO <sub>3</sub> )	Boron (B)				
						CENTRAL COASTAL REGION (No. 3)													
						PAJARO VALLEY (3-2)													
S. H. Gendrup domestic and irrigation	11S/2E-27A1	9-6-62		691		40 1.76												DNR	
		5-21-63		680	8.3	74 3.68	24 1.97	40 1.75	1.5 0.04	4.2 0.14	275 4.51	49 1.03	55 1.55	0 0.00	0.4 0.02	0.1 21	434 24 262 49	LL	
Frank T. Blake irrigation	12S/1E-11L1	9-5-62		420		22 0.96							20 0.56				DNR		
		5-21-63		450	8.3	37 1.84	20 1.65	23 1.00	2.4 0.06	3.0 0.10	206 3.38	24 0.50	16 0.45	3.0 0.05	0.2 0.01	1.0 22	258 22 175 0	LL	
Sunset Beach Park domestic	12S/1E-11N1	9-5-62		423		31 0.91							24 0.68				DNR		
		5-21-63		410	7.6	34 1.70	19 1.61	22 0.95	1.7 0.04	0 0.00	188 3.08	19 0.40	20 0.57	5.0 0.08	0.2 0.01	0.1 23	282 22 165 11	LL	
J. Rocha, Jr. irrigation	12S/1E-14L1	9-5-62		357		33 1.44							52 1.47				DNR		
		5-22-63		380	7.9	21 1.06	19 1.57	27 1.17	0.5 0.02	0 0.00	60 0.98	26 0.57	39 1.10	67 1.08	0.1 0.01	0.1 29	250 31 131 82	LL	
E. L. Padden domestic	12S/1E-23R1	9-5-62		582		44 1.91							25 0.70				DNR		
		5-22-63		560	8.4	22 1.11	30 2.45	50 2.17	1.3 0.34	6.0 0.20	259 4.25	32 0.66	30 0.85	0 0.00	0.1 0.01	0.1 19	322 36 188 0	LL	
H. Trafton irrigation	12S/1E-24G1	9-5-62		505		27 1.17							22 0.62				DNR		
		5-21-63		511	8.4	36 1.78	30 2.50	28 1.20	3.6 0.09	6.0 0.20	238 3.90	24 0.50	21 0.60	31 0.50	0.2 0.01	0.1 29	314 21 216 11	LL	
domestic	12S/1E-24Q	9-5-62		466		34 1.48							17 0.48				DNR		
		5-22-63		490	8.2	33 1.63	21 1.70	37 1.60	5.5 0.14	0 0.00	224 3.67	42 0.88	16 0.40	0 0.00	0.1 0.01	0.1 22	286 32 167 0	LL	
A. L. Naugman irrigation	12S/2E-7K1	9-5-62	63	492		22 0.96							17 0.48				DNR		

TABLE E-2

## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance in mhos at 25° C	pH	Mineral constituents in										parts per million					Total dissolved solids in ppm	Per cent total solids	Hardness as CaCO <sub>3</sub> Total ppm	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potas.-Carbonate sum (K)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Silica (SiO <sub>2</sub> )	Other constituents <sup>d</sup>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO <sub>3</sub> total ppm	Analyzed by							
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)					Barium (Ba)	Silica (SiO <sub>2</sub> )	Other constituents				
	100262																								
C. McGinnis domestic and irrigation	128/3E-1901	7-30-62	65	350	8.1	1.1	0.80	39	0.8	0	1.00	3.8	58	8.5	0.2	0.0	44	233	48	93	11	DNR			
H. Fukuba irrigation	125/3E-30A1	7-30-62	66	465	8.0	1.2	0.98	1.90	1.8	0	81	1.6	72	36	0.1	0.0	36	288	43	125	58	DNR			
Hurley irrigation and domestic	135/1E-1A1	7-23-62	63	1320	8.4	0.94	6.3	85	3.2	10.2	1.99	7.7	289	8.2	0.1	0.2	27	832	27	492	312	DNR			
M. Vaughn domestic and irrigation	135/2E-1K1	7-31-62	64	260	8.0	1.2	0.84	28	0.9	0	87	1.9	28	18	0.1	0.0	44	194	45	72	0	DNR			
irrigation	135/2E-3M1	8-15-62	63	1100	8.4	0.83	5.6	91	3.9	9.0	285	1.87	106	59	0.1	0.1	31	810	31	438	190	DNR			
G. H. Hurley irrigation	135/2E-6E2	7-24-62	64	1300	8.2	0.71	2.3	138	3.0	0	197	112	262	20	0.1	0.2	46	792	45	370	8	DNR			
F. Capurro & Sons domestic and irrigation	135/2E-6P1	9-5-62	997				3.87	6.00	0.08	0.00	3.23	2.34	74.0	0.32	0.01							DNR			
							8.35						4.17												

TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	Mineral constituents in parts per million												Total dissolved solids in ppm	Per cent sodium ion in ppm	Hardness as CaCO <sub>3</sub> ppm	Analyzed by c			
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)	Silica (SiO <sub>2</sub> )								
																Other constituents <sup>d</sup>							
MURBAN	10S/4E-17F1	6-27-63		735	8.3	43	46	53	15	0	387	19	45	3.6	0.3	0.23	28	427	28	294	0	DNR	
						214	373	230	0.04	0.00	6.34	0.40	1.27	0.06	0.02								
	10S/4E-18C2	6-27-63		442	8.1	41	22	17	1.0	0	210	26	14	1.7	0.2	0.07	38	268	16	194	22	DNR	
						204	184	0.74	0.02	0.00	3.44	0.54	0.39	0.27	0.01								
	10S/4E-28D2	6-27-63		513	8.3	27	34	31	1.0	0.0	236	22	23	6.2	0.3	0.20	31	300	24	208	0	DNR	
						135	281	135	0.02	0.00	4.20	0.46	0.65	0.10	0.02								
	10S/4E-34L5	6-27-63		738	7.3	51	38	48	1.2	0	323	27	42	35	0.3	0.20	30	438	27	284	19	DNR	
						234	313	209	0.03	0.00	5.29	0.56	1.18	0.36	0.02								
	11S/4E-4Q3	6-27-63		740	8.2	63	50	22	0.7	0	338	38	22	4.0	0.2	0.27	28	466	12	361	84	DNR	
						314	407	0.96	0.02	0.00	5.54	1.21	0.62	0.64	0.01								
	11S/4E-21B2	6-27-63		671	8.1	62	36	26	1.4	0	287	55	21	38	0.2	0.23	29	412	16	304	69	DNR	
						309	238	113	0.04	0.00	4.70	1.14	0.59	0.81	0.01								
MURBAN	11S/5E-27W1	6-28-63		582	7.8	57	27	27	1.5	0	272	44	26	3.9	0.2	0.40	18	335	19	253	30	DNR	
						284	221	117	0.04	0.00	4.46	0.92	0.73	0.06	0.01								
	12S/4E-34P2	6-27-63		2010	7.7	189	78	156	2.6	0	346	464	241	26	0.4	0.64	27	1370	30	792	508	DNR	
						943	639	679	0.07	0.00	5.67	9.66	6.80	0.42	0.02								
	12S/4E-35C1	6-27-63		1570	8.3	64	103	132	3.2	0	537	317	101	0.0	0.4	1.0	25	1040	36	582	142	DNR	
						319	844	6.61	0.08	0.00	8.80	6.60	2.85	0.00	0.02								
	12S/4E-36G1	6-27-63		1950	8.1	141	102	184	3.1	0	625	431	138	5.2	0.4	1.0	28	1360	34	774	262	DNR	
						704	842	800	0.08	0.00	10.26	8.97	3.69	0.08	0.02								
	12S/5E-3W2	6-28-63		1920	8.2	94	116	179	3.6	0	450	400	189	37	0.3	1.1	28	1270	35	711	342	DNR	
						469	931	779	0.09	0.00	7.38	8.33	3.33	0.60	0.02								
	F. Freitas & Partado domestic and irrigation	12S/5E-13A1	6-27-63		1810	7.9	148	96	156	3.3	0	838	229	100	6.2	0.4	0.90	30	1150	31	764	60	DNR
							738	788	679	0.08	0.00	14.06	4.77	2.82	0.10	0.02							
P. Rovella domestic and irrigation	12S/5E-36A1	6-28-63		1330	8.2	24	97	276	2.1	0	490	64	150	0.6	0.2	1.4	28	774	85	100	0	DNR	
						120	0.80	12.01	0.05	0.00	8.03	1.33	4.23	0.01	0.01								
Mrs. S. Brandom domestic and stock	12S/6E-7W2	6-28-63		438	7.8	22	11	55	4.0	0	235	0.0	25	1.5	0.2	0.85	67	294	53	101	0	DNR	
						110	0.92	239	0.10	0.00	3.83	0.00	0.70	0.02	0.01								

TABLE E-1

SALINAS VALLEY (3-4)

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	Site well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	Mineral constituents in parts per million - equivalents per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO <sub>3</sub> Total ppm	Analyzed by				
					Mineral constituents in																	
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)					Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents	
NORBON					SALINE VALLEY (3-4-4) (Contd.)																	
J. Tate domestic and irrigation	135/2E-2011	7-16-62	68	1130	8.1	65	37	105	2.5	0	113	68	264	0.0	0.1	0.1	43	698	42	315	222	DNR
						3.24	3.05	4.55	0.06	0.00	1.85	1.42	7.45	0.00	0.01	0.01						
J. J. King irrigation	135/2E-3102	7-16-62	70	685	8.3	30	16	89	2.8	3.0	170	21	123	1.3	0.1	0.2	37	422	58	136	0	DNR
						1.77	1.26	3.87	0.07	0.10	2.80	0.45	3.45	0.02	0.01	0.01						
Holera Estate domestic	135/2E-31X2	7-17-62	67	545	8.5	22	14	66	9.0	9.0	215	11	60	1.3	0.1	0.1	29	348	58	114	0	DNR
						1.13	1.15	3.30	0.06	0.30	3.52	0.22	1.70	0.02	0.01	0.01						
E. Ballone irrigation	135/2E-31X2	7-17-62	70	800	8.2	38	19	103	2.2	0	183	19	182	0.9	0.1	0.2	31	518	55	176	26	DNR
						1.90	1.23	4.47	0.07	0.00	3.00	0.41	4.55	0.01	0.01	0.01						
E. Ballone irrigation	135/2E-31N2	7-17-62	72	980	8.2	60	28	95	3.2	0	114	31	229	1.3	0.1	0.2	33	642	39	315	222	DNR
						2.99	3.31	4.13	0.08	0.00	1.87	1.07	6.45	0.02	0.01	0.01						
O. P. Overhouse irrigation	135/2E-32A2	7-16-62	72	500	8.4	19	16	62	2.2	3.0	149	14	23	0.9	0.1	0.1	33	288	53	115	0	DNR
						0.97	1.32	2.70	0.07	0.10	2.45	0.29	2.05	0.01	0.01	0.01						
O. P. Overhouse irrigation	135/2E-32C1	7-16-62	66	495	8.5	58	2.7	51	2.3	6.0	198	12	53	0.4	0.1	0.1	31	332	41	154	0	DNR
						2.86	0.22	2.20	0.06	0.20	3.25	0.24	1.48	0.01	0.01	0.01						
Holera Estate irrigation	135/2E-32N1	7-17-62	70	490	8.4	26	11	47	2.4	3.6	167	22	60	0.9	0.1	0.1	33	334	57	106	63	DNR
						1.23	0.88	2.90	0.06	0.12	2.73	0.47	1.70	0.01	0.01	0.01						
C. Risetti irrigation and domestic	135/2E-33R1	7-19-62	66	735	8.4	76	22	53	2.8	9.0	223	74	82	8.5	0.1	0.1	34	494	29	280	82	DNR
						3.79	1.82	2.30	0.07	0.30	3.65	1.54	2.30	0.14	0.01	0.01						
R. Hollenbeck domestic and irrigation	135/3E-411	8-1-62	69	320	8.0	14	9.5	37	1.1	0	87	3.4	46	9.8	0.1	0.2	44	230	52	73	1	DNR
						0.72	0.74	1.60	0.03	0.00	1.44	0.07	1.30	0.16	0.01	0.01						
F. B. Taganas domestic and irrigation	135/3E-20R2	7-26-62	64	285	7.9	16	6.0	34	0.7	0	86	4.8	43	3.2	0.1	0.0	37	186	52	66	0	DNR
						0.82	0.50	1.47	0.02	0.00	1.42	0.10	1.20	0.05	0.01	0.01						
C. Lightfoot domestic and irrigation	135/3E-29A1	7-26-62	64	570	7.9	19	15	69	1.1	0	82	13	124	2.7	0.2	0.0	44	336	58	107	39	DNR
						0.94	1.20	3.00	0.03	0.00	1.35	0.28	3.50	0.04	0.01	0.01						
V. Coco domestic	145/1E-24Q2	7-12-62	62	1060	7.0	63	35	103	2.0	0	46	73	145	208	0.1	0.1	29	720	47	300	262	DNR
						3.20	2.24	4.47	0.05	0.00	0.75	1.55	4.10	3.35	0.01	0.01						
Marina Del Mar School domestic and irrigation	145/1E-25K1	7-12-62	60	500	7.0	26	16	49	1.9	0	37	20	84	77	0.1	0.1	23	290	45	129	99	DNR
						1.30	1.28	2.13	0.05	0.00	0.60	0.43	2.35	0.13	0.01	0.01						

TABLE E-1  
ANALYSES OF GROUND WATER  
1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conduct- ance (micro- mhos at 25° C)	pH	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per- cent sodium in ppm	Hardness as CaCO <sub>3</sub> Total ppm	Analyzed by c					
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Polys- phos- phate (CO <sub>3</sub> )	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Ni- trate (NO <sub>3</sub> )	Fluo- ride (F)					Boron (B)	Silica (SiO <sub>2</sub> )	Other constituents <sup>d</sup>		
	MODERN					SALINAS VALLEY (3-4) (Cont.)																		
Mrs. L. Martin irrigation and domestic	145/2E-601	7-17-62	72	535	8.4	34 1.69	10 0.84	70 3.05	3.2 0.08	9.0 0.30	193 3.17	30 0.63	60 1.60	1.3 0.02	0.1 0.01	0.1	0.1	35		366	54	127	0	DWR
E. Struve irrigation	145/2E-602	7-17-62	72	510	8.4	34 1.72	11 0.94	63 2.75	2.3 0.06	6.0 0.20	197 3.23	23 0.48	51 1.43	1.3 0.02	0.1 0.01	0.1	0.1	35		348	50	133	0	DWR
J. Jefferson irrigation	145/2E-802	8-7-62	72	500	7.8	34 1.71	13 1.12	53 2.30	2.3 0.06	0.00	206 3.38	150 0.33	50 1.40	1.3 0.02	0.2 0.01	0.1	0.1	34		304	44	142	0	DWR
J. P. Rogers domestic and irrigation	145/2E-1101	7-19-62	66	455	8.2	28 1.36	22 1.75	40 1.75	2.3 0.06	0.00	180 2.95	12 0.25	48 1.35	1.8 0.03	0.1 0.01	0.1	0.1	36		298	35	152	5	DWR
E. C. Eaton irrigation	145/2E-1201	7-19-62	64	500	8.2	70 3.48	6.7 0.56	33 1.43	1.8 0.05	0.00	243 3.98	11 0.24	41 1.15	3.6 0.06	0.1 0.01	0.0	0.2	22		334	26	202	3	DWR
L. A. Wilder domestic	145/2E-1401	7-18-62	66	585	8.3	56 2.78	13 1.13	55 2.40	3.7 0.09	3.0 0.10	201 3.30	48 1.00	62 1.75	4.0 0.06	0.1 0.01	0.1	0.1	32		384	37	195	25	DWR
Monterey County Bank irrigation and domestic	145/2E-1501	7-18-62	66	565	8.4	44 2.22	18 1.54	53 2.30	3.0 0.08	6.0 0.20	148 2.53	102 2.12	43 1.20	0.4 0.01	0.1 0.01	0.2	0.1	21		408	37	188	52	DWR
J. G. Armstrong Co. irrigation	145/2E-1801	7-18-62	66	1055	8.0	80 3.96	35 2.93	98 4.25	4.0 0.10	0.00	113 1.85	185 3.85	190 5.35	4.0 0.06	0.1 0.01	0.2	0.1	24		738	35	345	252	DWR
A. H. Borders irrigation	145/2E-2301	8-7-62	70	750	8.1	52 2.58	27 2.18	74 3.20	4.2 0.11	0.00	132 2.17	198 2.88	99 2.80	4.0 0.06	0.1 0.01	0.2	0.1	33		512	40	238	130	DWR
M. T. DeSerra irrigation	145/2E-2401	7-19-62	68	580	8.4	54 2.74	15 1.20	52 2.25	2.7 0.07	6.0 0.20	195 3.20	41 0.87	63 1.78	2.2 0.04	0.1 0.01	0.1	0.1	29		388	36	197	27	DWR
N. T. DeSerra irrigation	145/2E-2501	7-12-62	64	1200	7.5	110 5.31	39 3.17	94 4.10	3.8 0.10	0.00	302 4.95	156 3.23	162 4.55	5.3 0.09	0.1 0.01	0.3	0.1	26		806	32	434	186	DWR
M. Borders irrigation and domestic	145/2E-2601	7-18-62	66	1180	8.2	102 5.11	43 3.67	98 4.25	4.6 0.17	0.00	195 3.20	194 4.04	195 5.50	0.0 0.00	0.1 0.01	0.0	0.2	33		828	33	429	269	DWR
A. Goodall domestic	145/2E-3002	7-12-62	63	510	7.3	23 1.15	13 1.05	53 2.30	1.8 0.05	0.00	55 0.90	17 0.36	69 1.95	7.2 0.18	0.1 0.01	0.1	0.1	28		308	50	110	65	DWR
D. P. McFadden irrigation	145/2E-3501	8-7-62	70	450	8.2	43 2.14	28 0.59	28 1.20	2.7 0.07	3.0 0.10	107 1.75	81 1.68	17 0.48	0.9 0.01	0.1 0.01	0.1	0.1	30		284	34	137	44	DWR

TABLE E-1

## ANALYSES OF GROUND WATER

1963

Owner and use	State well number and other number	Date sampled	Temp in °F	Specific conductance in micro-mhos at 25° C	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium in total	Hardness as CaCO <sub>3</sub>		Analyzed by c		
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)			Boron (B)	Silica (SiO <sub>2</sub> )		Total	N.C. ppm
	YDB641																					
A. Laniol irrigation and domestic	145/3E-30F1	7-12-62	66	1850	7.4	323 11.13	44 3.60	157 6.83	4.3 0.11	0 0.00	464 7.60	233 4.85	312 8.80	8.5 0.14	0.2 0.01	0.4	24	32	742	362	DNR	
	145/3E-30P1	7-12-62	62	1420	7.9	78 3.02	55 4.45	157 6.83	3.8 0.10	0 0.00	261 4.28	132 3.16	257 7.25	22 0.35	0.2 0.01	0.3	27	926	451	205	DNR	
P. C. & E. municipal	145/3E-33C1	7-20-62	70	625	8.4	50 2.53	21 1.71	53 2.30	2.7 0.07	6.0 0.20	174 2.85	58 1.20	78 2.20	3.6 0.06	0.1 0.01	0.1	38	426	35	212	65	DNR
P. Calabrese domestic	155/1E-22C1	7-11-62	63	705	8.2	49 2.45	19 1.58	75 3.25	2.8 0.07	0 0.00	165 2.70	54 1.12	114 3.20	8.5 0.14	0.2 0.01	0.1	35	438	44	202	67	DNR
O. Veach domestic	155/1E-23C1	7-11-62	72	226	7.2	11 0.53	2.9 0.24	32 1.40	1.1 0.03	0 0.00	53 0.86	3.4 0.07	40 1.13	0 0.00	0.1 0.01	0.0	20	132	64	38	0	DNR
J. Sileo domestic	155/1E-26E2	7-11-62	67	500	7.5	20 0.99	10 0.85	63 2.75	2.4 0.06	0 0.00	59 0.97	14 0.28	103 2.90	33 0.34	0.1 0.01	0.1	31	300	59	92	48	DNR
irrigation and domestic	155/2E-1A3	7-10-62	66	450	8.3	49 2.43	10 0.83	28 1.20	3.0 0.08	1.5 0.05	150 2.47	74 1.54	13 0.37	0.9 0.01	0.2 0.01	0.1	28	296		163	37	DNR
L. Jacks irrigation	155/2E-2Q1	7-9-62	64	1100	7.9	86 4.31	49 4.03	74 3.20	3.3 0.09	0 0.00	307 5.03	208 4.32	74 2.10	0.00 0.00	0.1 0.01	0.2	40	744	27	417	165	DNR
irrigation	155/3E-4K3	8-7-62	70	570	8.1	36 1.82	19 1.56	54 2.35	3.2 0.09	0 0.00	122 2.00	133 2.77	38 1.05	0.9 0.01	0.2 0.01	0.2	28	378	40	169	69	DNR
irrigation	155/3E-5Q4	8-7-62	64	2000	8.0	107 5.35	71 5.79	111 5.10	6.5 0.17	0 0.00	157 2.58	624 12.98	243 6.85	0.0 0.00	0.4 0.02	0.6	20	1508	50	557	428	DNR
P. Giattinini domestic and irrigation	155/3E-7Q1	7-20-62	68	1100	8.0	87 4.37	36 3.04	77 3.33	4.3 0.11	0 0.00	143 2.35	302 6.28	130 3.65	0.0 0.00	0.2 0.01	0.3	31	650	27	450	332	DNR
Specklee Sugar Co. irrigation	155/3E-16M1	8-10-62	64	870	8.1	58 2.90	42 4.24	51 2.20	3.9 0.10	0 0.00	189 3.10	209 4.35	66 1.85	1.8 0.02	0.1 0.01	0.2	26	610	22	357	202	DNR
J. Violini irrigation	155/3E-17P1	8-10-62	66	830	8.5	16 0.81	54 4.43	82 4.00	5.2 0.13	12 0.40	301 4.92	20 0.62	116 3.25	0.0 0.00	0.1 0.01	0.2	33	494	42	262	0	DNR
J. Hugo domestic	165/2E-111	7-25-62	67	600	8.2	29 1.47	13 1.13	70 3.05	2.2 0.06	0 0.00	144 2.36	16 0.34	110 3.10	3.6 0.06	0.4 0.02	0.1	40	366	52	130	12	DNR
Corral de Tierra Country Club domestic and irrigation	165/2E-3J1	7-25-62	68	830	8.5	81 4.08	16 1.34	78 3.40	2.6 0.07	15 0.50	244 4.00	40 0.85	124 3.50	0.0 0.00	0.2 0.01	0.1	9	474	36	271	46	DNR

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	Site well number and other number	Date sampled	Temp in °F	Specific conductance in micro-mhos at 25° C	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by c			
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (CO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Boron (B)		Silica (SiO <sub>2</sub> )	Other constituents		Total	N.C. ppm	
						SALINAS VALLEY (3-4) (Cont.)																
C. Phillips domestic	16S/2E-12G1	7-25-62	73	1060	8.4	54 2.72	22 1.78	140 6.10	3.3 0.08	0 0.00	152 2.50	34 0.70	254 10.10	6.1 0.01	0.1 0.01	0.1	44	624	57	225	100	DNR
K. R. Nutting irrigation	16S/4E-24A1	7-26-62	66	1350	8.2	89 4.46	62 5.08	122 5.30	3.5 0.09	0 0.00	148 2.43	403 8.41	117 0.92	37 0.01	0.2 0.01	0.4	36	1044	35	477	355	DNR
J. C. Twisselman irrigation	16S/4E-23K1	7-27-62	64	1120	8.2	76 3.84	56 4.55	103 4.47	3.9 0.10	0 0.00	238 3.90	331 6.90	74 2.10	0.0 0.00	0.1 0.01	0.3	32	810	34	420	225	DNR
C. Doud irrigation	17S/5E-9Q1	7-31-62	64	610	8.4	25 3.76	28 2.30	130 1.30	2.2 0.06	2.2 0.24	125 3.61	28 0.80	0.0 0.00	0.1 0.01	0.1 0.01	0.1	27	450	18	303	11	DNR
irrigation	17S/6E-7Q1	7-13-62	68	620	8.2	40 2.02	21 1.68	58 2.50	2.9 0.07	0 0.00	134 2.14	103 2.14	62 1.75	4.9 0.08	0.1 0.01	0.2	36	432	40	185	75	DNR
N. Baker irrigation	17S/6E-27K1	7-31-62	68	1100	8.1	62 3.08	51 4.22	311 4.65	3.1 0.08	0 0.00	149 2.45	337 7.03	94 2.65	5.8 0.09	0.1 0.01	0.4	30	816	38	365	243	DNR
L. M. & V. Jacks irrigation	18S/6E-1E1	8-3-62	66	930	7.6	40 2.02	30 2.48	120 5.20	4.2 0.11	0 0.00	207 3.40	222 4.62	50 1.40	33 0.53	0.1 0.01	0.5	26	632	53	225	55	DNR
L. Jacks irrigation	18S/6E-281	8-3-62	67	1170	7.9	119 5.97	45 3.05	56 0.14	0 0.00	0 0.00	119 1.95	365 7.61	87 2.45	57 0.92	0.1 0.01	0.1	21	812	24	481	383	DNR
F. W. Smith irrigation	18S/6E-2811	8-3-62	68	440	8.2	48 2.40	13 1.06	23 1.00	2.4 0.06	0 0.00	180 2.55	69 1.45	13 0.35	3.4 0.06	0.1 0.01	0.1	28	300	22	173	46	DNR
E. Pincini irrigation	18S/7E-29C1	8-3-62	66	2400	8.0	263 13.08	115 9.48	149 6.47	4.4 0.11	0 0.00	159 2.60	870 18.13	287 0.60	37 0.01	0.1 0.01	0.4	28	2032	22	1128	998	DNR
Salinas Land Co. irrigation	19S/7E-10P1	8-9-62	61	760	8.2	53 2.65	35 2.90	20 2.17	2.0 0.05	0 0.00	146 2.06	99 2.06	108 3.05	11 0.18	0.2 0.01	0.3	25	504	28	277	157	DNR
D. M. Ringman domestic and irrigation	19S/7E-13Q2	8-8-62	65	1020	8.2	37 1.85	57 4.72	102 4.43	2.7 0.07	0 0.00	176 2.88	283 5.89	64 1.81	37 0.60	0.2 0.01	0.6	27	732	40	328	184	DNR
irrigation	19S/8E-32A1	8-8-62	65	3500	8.4	281 13.99	70 5.70	500 21.75	8.5 0.22	13 0.44	260 4.26	1335 27.80	316 8.90	24 0.38	0.4 0.02	2.0	23	2980	52	985	750	DNR
G. Rose irrigation	19S/8E-33R1	8-8-62	65	2900	8.3	125 6.25	130 10.71	360 15.65	6.7 0.17	3.0 0.10	188 3.08	1057 22.00	279 7.85	25 0.40	0.4 0.02	1.8	24	2210	47	848	689	DNR
A. Duarte irrigation	20S/8E-5R1	8-8-62	66	1360	7.9	67 3.34	64 5.55	160 6.95	4.5 0.12	0 0.00	217 3.55	363 7.56	144 4.05	17 0.28	0.2 0.01	1.1	31	1096	44	430	253	DNR



ANALYSES OF GROUND WATER  
1963E-41

TABLE E-1

ANALYSES OF GROUND WATER  
1963

Owner and use	Sight well number and other number	Date sampled	Temp in °F	Specific conductance (micro-mhos at 25° C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Hardness as CaCO <sub>3</sub>		Analyzed by	
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)		Boron (B)	Silica (SiO <sub>2</sub> )		Other constituents <sup>d</sup>
	NDBEN					CARNEL VALLEY (3-7) (Cont.)														
Carnel Sewage Treatment Plant Industrial	16S/14-13L2	7-11-62	62	735	8.4	70	2.3	2.9	3.0	226	85	2.3	0.4	0.1	26		508	33	270	DMR
					3.49	1.92	2.80	0.07	0.10	3.70	2.40	0.04	0.02							
B. Odello Irrigation	16S/14-13Q2	8-14-62	62	830	8.4	83	2.3	4.1	7.2	208	127	2.1	0.2	0.1	29		660	30	306	DMR
					4.17	1.94	2.60	0.11	0.24	3.41	2.65	0.33	0.01							
E. Haber Irrigation	16S/1E-16L1	7-10-62	73	300	8.2	36	8.6	2.1	0	114	45	0	0.2	0.0	23		220	24	125	DMR
					1.78	0.72	0.80	0.05	0.00	1.87	0.39	0.00	0.01							
Harbert Irrigation and domestic	16S/1E-16N1	7-10-62	71	660	8.1	52	25	2.3	0	165	118	0.9	0.4	0.1	33		446	32	233	DMR
					2.61	2.06	2.20	0.06	0.00	2.70	2.46	0.01	0.02							
Irrigation	16S/1E-17G1	7-10-62	66	1180	7.7	150	1.8	3.7	0	354	159	1.33	0.9	0.1	0.2	19	838	31	451	DMR
					7.49	1.53	4.10	0.09	0.00	5.80	3.33	0.01	0.01							
Irrigation	16S/1E-18K1	7-11-62	62	610	8.4	62	1.9	3.4	4.2	196	85	0.4	0.1	0.1	27		414	27	236	DMR
					3.12	1.60	1.80	0.09	0.14	3.21	1.77	0.01	0.01							
R. Martin Irrigation	16S/1E-23F1	7-10-62	66	880	8.0	63	3.2	3.5	0	122	247	84	0.0	0.6	0.2	31	670	40	287	DMR
					3.14	2.59	3.83	0.09	0.00	2.00	5.15	2.35	0.00	0.03						
E. Holt Irrigation	16S/1E-25B1	7-9-62	65	460	8.1	42	1.5	2.8	0	137	80	30	0.0	0.4	0.1	18	324	33	162	DMR
					2.07	1.18	1.60	0.07	0.00	2.25	1.66	0.65	0.00	0.02						

# RADIOASSAY OF GROUND WATER

1963

Well Number	Date Sampled	Date Analyzed	Radioassay in Pico Curies .Per Liter				Gross Activity
			Suspended Activity		Dissolved Activity		
			Alpha	Beta	Alpha	Beta	
			<u>SAN FRANCISCO BAY REGION (No. 2)</u>				
			<u>CLAYTON VALLEY 2-5</u>				
1N/1W-4A1	7-11-62	8-9-62					0 ± 3.8
1N/1W-4R1	7-11-62	8-9-62					0 ± 3.9
2N/1W-30J1	7-10-62	9-12-62					5.5 ± 3.4
2N/1W-30K1	7-10-62	8-9-62					0 ± 3.8
2N/1W-31D1	7-10-62	8-9-62					0 ± 3.8
2N/2W-13P1	7-10-62	8-9-62					2.4 ± 3.9
2N/2W-26B1	7-10-62	8-9-62					2.9 ± 3.9
2N/2W-36J1	7-11-62	9-11-62					1.0 ± 3.4
			<u>YGNACIO VALLEY 2-6</u>				
1N/1W-7K1	7-11-62	8-9-62					0 ± 3.9
1N/1W-29G1	7-11-62	8-9-62					0 ± 3.8
1N/2W-11N1	7-11-62	8-9-62					4.0 ± 3.9
1N/2W-13P1	7-11-62	8-9-62					1.9 ± 4.0

TABLE E-2  
RADIOASSAY OF GROUND WATER  
1963

Well Number	Date Sampled	Date Analyzed	Radioassay in Pico Curies Per Liter					
			Suspended Activity		Dissolved Activity		Gross Activity	
			Alpha	Beta	Alpha	Beta		
			YGNACIO VALLEY 2-6 (Cont.)					
2N/2W-27R1	7-10-62	8-9-62					0 ± 3.9	
2N/2W-36E1	7-10-62	8-9-62					0.4 ± 4.0	
			SANTA CLARA VALLEY 2-9 (East Bay)					
4S/1W-21F2	9-6-62	9-24-62 9-21-62	0 ± 0.14	0 ± 4.6	0.06 ± 0.16	0 ± 4.6		
4S/1W-21F2	12-5-62	12-21-62 12-18-62	0 ± 0.17	2.5 ± 4.5	0 ± 0.16	0.4 ± 4.5		
4S/1W-21F2	3-7-63	3-17-63 3-15-63	0.1 ± 0.2	8.6 ± 4.9	0.0 ± 0.1	16.8 ± 5.0		
4S/1W-21F2	6-6-63	7-28-63 7-26-63	0 ± 0.1	0 ± 4.5	0 ± 0.2	6.6 ± 4.6		
4S/1W-21M1	9-6-62	9-24-62 9-21-62	0 ± 0.19	0 ± 4.5	0 ± 0.18	0 ± 4.6		
4S/1W-21M1	12-5-62	12-21-62	0 ± 0.18		0 ± 0.20			

TABLE E-2  
RADIOASSAY OF GROUND WATER  
1963

Well Number	Date Sampled	Date Analyzed	Radioassay in Pico Curies Per Liter				Gross Activity
			Suspended Activity		Dissolved Activity		
			Alpha	Beta	Alpha	Beta	
		SANTA	CLARA VALLEY 2-9 (East Bay) (Cont.)				
4S/1W-21M1	3-7-63	3-17-63	0.0 ± 0.1		0.0 ± 0.1		
		3-15-63		11.7 ± 4.9		32.2 ± 5.2	
4S/1W-21M1	6-6-63	7-28-63	0 ± 0.1		0.2 ± 0.2		
		7-26-63		0.6 ± 4.6		1.0 ± 4.6	
6S/1E-7C1	8-62	10-8-62					1.8 ± 3.3
6S/1E-21G1	8-62	10-8-62					0 ± 3.3
6S/1W-11B1	8-62	10-8-62					0 ± 3.3
6S/1W-14E1	8-62	10-8-62					0 ± 3.3
6S/1W-16A1	8-62	10-8-62					0 ± 3.4
6S/1W-17N2	8-62	10-8-62					0 ± 3.4
6S/1W-26D2	9-13-62	10-8-62					2.0 ± 3.3
6S/1W-28R1	8-62	10-8-62					0 ± 3.3
6S/1W-29C1	8-62	10-8-62					0 ± 3.2
6S/1W-30M1	8-62	10-8-62					0 ± 3.4
6S/2W-9H1	8-62	10-8-62					0 ± 3.3

TABLE E-2  
RADIOASSAY OF GROUND WATER  
1963

Well Number	Date Sampled	Date Analyzed	Radioassay in Pico Curies Per Liter				
			Suspended Activity		Dissolved Activity		Gross Activity
			Alpha	Beta	Alpha	Beta	
		SANTA CLARA VALLEY 2-9 (East Bay) (Cont.)					
6S/2W-9K2	8-62	10-8-62					0 ± 3.2
6S/2W-20N1	8-62	10-8-62					0 ± 3.1
6S/2W-21A	8-62	10-8-62					0 ± 3.2
6S/2W-24M3	8-62	10-8-62					0 ± 3.4
6S/2W-29D2	8-62	10-8-62					0 ± 3.2
6S/2W-34M1	8-62	10-8-62					0 ± 3.2
6S/2W-36H2	8-62	10-8-62					0 ± 3.3
7S/1W-5L	8-62	10-8-62					0 ± 3.1
		LIVERMORE VALLEY 2-10					
2S/2W-27K1	4-11-62	5-11-62					0 ± 4.0
2S/2W-35C2	4-11-62	5-11-62					0 ± 3.84
3S/2E-8H1	4-11-62	5-11-62					0 ± 3.8
4S/1E-3K1	4-4-62	5-11-62					0 ± 3.9
4S/1E-10G1	4-10-62	5-11-62					1.28 ± 4.2
4S/1E-10H1	4-10-62	5-11-62					36.31 ± 4.6

# RADIOASSAY OF GROUND WATER

1963

Well Number	Date Sampled	Date Analyzed	Radioassay in Pico Curies Per Liter				Gross Activity
			Suspended Activity		Dissolved Activity		
			Alpha	Beta	Alpha	Beta	
			<u>CENTRAL COASTAL REGION (No. 3)</u>				
			<u>PAJARO VALLEY 3-2</u>				
12S/2E-30E1	7-23-62	10-22-62					0 ± 3.4
12S/2E-30N1	7-23-62	10-8-62					0 ± 3.4
12S/2E-31C1	7-23-62	10-8-62					0 ± 3.3
12S/2E-31K1	7-24-62	10-8-62					0 ± 3.4
12S/2E-32C1	7-24-62	9-26-62					5.1 ± 3.5
13S/1E-1A1	7-23-62	10-8-62					0 ± 3.4
13S/2E-6E2	7-24-62	9-26-62					4.2 ± 3.5
13S/2E-1K1	7-31-62	9-26-62					1.6 ± 3.5
			<u>SALINAS VALLEY 3-4</u>				
13S/2E-10J1	7-31-62	9-26-62					0 ± 3.4
			<u>CARMEL VALLEY 3-7</u>				
15S/1E-22C1	7-11-62	9-26-62					0 ± 3.4
15S/1E-23G1	7-11-62	9-26-62					0 ± 3.4



TABLE E-2  
RADIOASSAY OF GROUND WATER  
1963

Well Number	Date Sampled	Date Analyzed	Radioassay in Pico Curies Per Liter				
			Suspended Activity		Dissolved Activity		Gross Activity
			Alpha	Beta	Alpha	Beta	
			<u>CARMEL VALLEY 3-7 (Cont.)</u>				
15S/1E-26N2	7-11-62	9-26-62					3.3 ± 3.9
16S/1E-16L1	7-10-62	9-26-62					1.6 ± 3.4
16S/1E-16N1	7-10-62	9-26-62					0 ± 3.5
16S/1E-17G1	7-10-62	9-26-62					0 ± 3.4
16S/1E-18K1	7-11-62	9-26-62					3.2 ± 3.4
16S/1E-23F1	7-10-62	9-26-62					2.1 ± 3.4
16S/1E-25B1	7-9-62	9-26-62					0.1 ± 3.4
16S/1W-13L2	7-11-62	9-26-62					0 ± 3.3

## SURFAC

- 1 SACRAMENTO RIVER AT COLLINSVILLE
- 2 SUISUN BAY AT BENICIA ARSENAL

## SUR

- 8a RUSSIAN RIVER NEAR HOPLAND
- 8b NAVARRO RIVER NEAR NAVARRO
- 8c BIG RIVER NEAR MOUTH
- 9 RUSSIAN RIVER NEAR HEALDSBURG
- 9a CHUALAR RIVER, SOUTH FORK, NEAR  
ANNAPOLIS
- 10 RUSSIAN RIVER AT GUERNEVILLE
- 10a RUSSIAN RIVER, EAST FORK, AT POT  
VALLEY POWERSHOUSE
- 10c NOYO RIVER NEAR FORT BRAGG
- 43 SALINAS RIVER NEAR SRECKELS
- 43a SALINAS RIVER AT FAGO ROBLES
- 43b NACIMIENTO RIVER NEAR SAN MIGUEL
- 43c SALINAS RIVER NEAR BRADLEY
- 43d SAN ANTONIO RIVER NEAR PLEYTO
- 71 ARROYO DEL VALLE NEAR LIVERMORE
- 72 RADA RIVER NEAR ST. HELENA
- 73 ALAMEDA CREEK NEAR NILES
- 74 LOS GATOS CREEK NEAR LOS GATOS
- 75 SAN LORENZO RIVER AT BIG TREES N  
FELTON
- 76 SOQUEL CREEK AT SOQUEL
- 77 FAJARO RIVER NEAR CHITTENDEN
- 77a SAN BENITO RIVER NEAR BEAR VALLE  
FIRE STATION
- 82 COYOTE CREEK NEAR MADRONE
- 83 CARREL RIVER AT ROBLES DEL RIO
- 96 UVAS CREEK NEAR MORGAN HILL
- 200 ALISAL CREEK ON OLD STAGE ROAD  
SALINAS
- 201 ALTAMONT CREEK AT ALTAMONT TURN  
OF SOUTH BAY AQUEDUCT
- 202 ARROYO DE LA LAGUNA AT VERONA
- 203 ARROYO SECO RIVER NEAR SOLEDAD
- 204 BEAN CREEK ONE MILE EAST OF FEL
- 205 BEAN CREEK AT BOULDER CREEK
- 206 BEAR CREEK FOUR MILES NORTHEAST  
BOULDER CREEK





Foldout too large  
for digitization

May be added at a  
later date



## GROUND WATER

## CENTRAL

NORTH COASTAL REGION

1-14.00	Potter Valley
1-15.00	Ukiah Valley
1-16.00	Sanel Valley
1-17.00	Alexander Valley
1-18.00	Santa Rosa Valley
1-18.01	Santa Rosa Area
1-18.02	Healdsburg Area
1-98.00	Lower Russian River

SAN FRANCISCO BAY REGION

2-1.00	Petaluma Valley
2-2.00	Napa-Sonoma Valley
2-2.01	Napa Valley
2-2.02	Sonoma Valley
2-3.00	Suisun-Fairfield
2-5.00	Clayton Valley
2-6.00	Ygnacio Valley
2-9.00	Santa Clara Valley
2-9.01	East Bay Area
2-9.02	South Bay Area
2-10.00	Livermore Valley
2-22.00	Half Moon Bay Ter
2-24.00	San Gregorio Vall
2-26.00	Pescadero Valley







Foldout too large  
for digitization

May be added at a  
later date

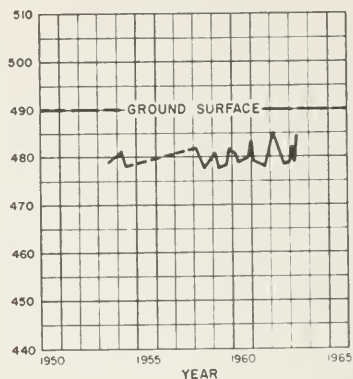


## SANEL VALLEY (I-16.00)

MENDOCINO COUNTY

WELL 13N/11W-18E1, M.D.B. &amp; M.

GROUND SURFACE ELEVATION 490'

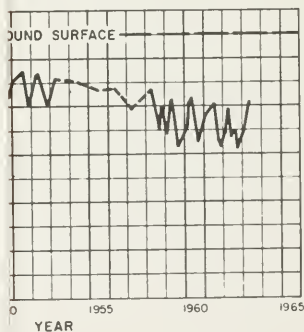


## SONOMA COUNTY (I-18.00)

SA AREA (I-18.01)

8W-13R1, M.D.B. &amp; M.

SURFACE ELEVATION 110'



MEASUREMENTS MADE AT INTERVALS  
OR MORE.

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES  
BAY AREA BRANCH  
HYDROLOGIC DATA  
CENTRAL COASTAL AREA

FLUCTUATION OF WATER LEVEL  
IN WELLS  
NORTH COASTAL REGION

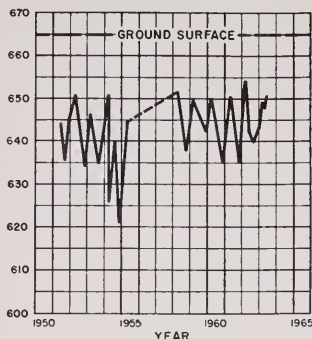
1963



ELEVATION IN FEET - U.S.C. & G.S. DATUM

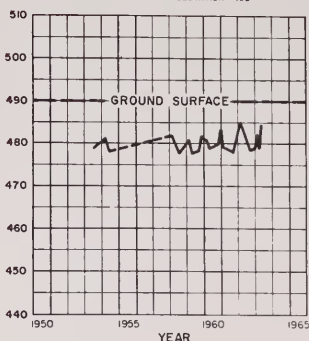
# UKIAH VALLEY (1-15.00)

MENDOCINO COUNTY  
WELL 15N/12W-8L1, M.D.B. & M.  
GROUND SURFACE ELEVATION 660'



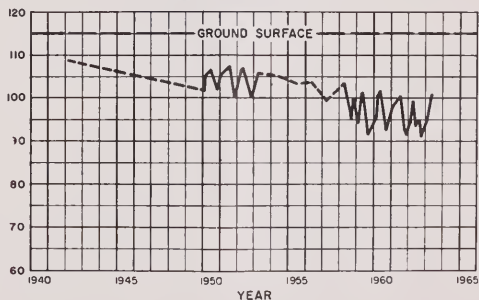
# SANUEL VALLEY (1-16.00)

MENDOCINO COUNTY  
WELL 13N/11W-18E1, M.D.B. & M.  
GROUND SURFACE ELEVATION 490'



# SANTA ROSA VALLEY, SONOMA COUNTY (1-18.00)

SANTA ROSA AREA (1-1801)  
WELL 6N/8W-13R1, M.D.B. & M.  
GROUND SURFACE ELEVATION 110'



----- CONNECTS MEASUREMENTS MADE AT INTERVALS  
OF A YEAR OR MORE.

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES  
BAY AREA BRANCH  
HYDROLOGIC DATA  
CENTRAL COASTAL AREA

FLUCTUATION OF WATER LEVEL  
IN WELLS  
NORTH COASTAL REGION

1963





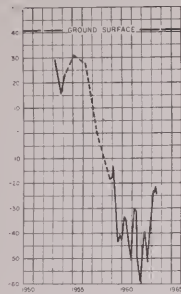




ELEVATION IN FEET - U.S.C.B.S. DATUM

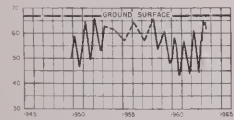
**PETALUMA VALLEY (2-100)**  
SONOMA COUNTY

WELL 5N17W-2002, M.D.B.M.  
GROUND SURFACE ELEVATION 8'



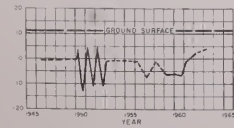
**NAPA VALLEY (2-201)**  
NAPA COUNTY

WELL 6N14W-17A1, M.D.B.M.  
GROUND SURFACE ELEVATION 41'



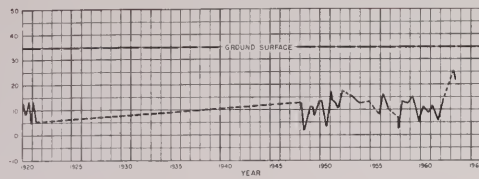
**SONOMA VALLEY (2-202)**  
SONOMA COUNTY

WELL 5N15W-20N1, M.D.B.M.  
GROUND SURFACE ELEVATION



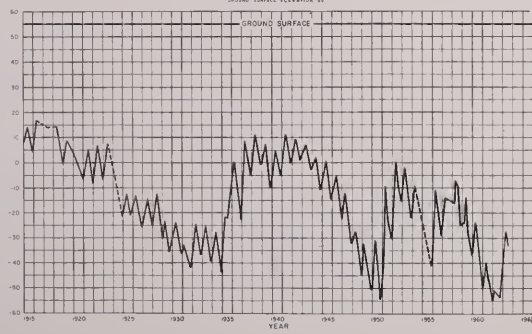
**SUISUN-FAIRFIELD VALLEY (2-300)**  
SOLANO COUNTY

WELL 4N12W-6A1, M.D.B.M.  
GROUND SURFACE ELEVATION 35'



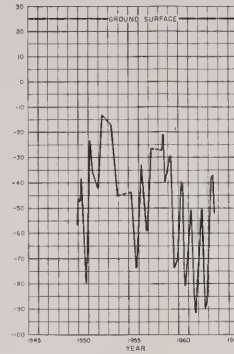
**SANTA CLARA VALLEY (2-900)**  
SOUTH ALAMEDA COUNTY (2-901) UPPER AQUIFER

WELL 451W-29C4, M.D.B.M.  
GROUND SURFACE ELEVATION 55'



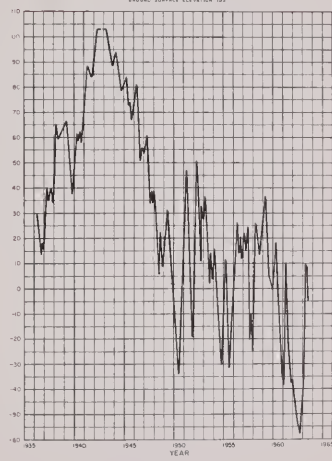
**SANTA CLARA VALLEY (2-900)**  
SOUTH ALAMEDA COUNTY (2-901) LOWER AQUIFER

WELL 451W-36N1, M.D.B.M.  
GROUND SURFACE ELEVATION 88'



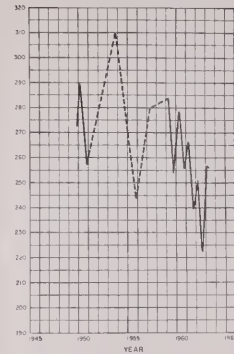
**SANTA CLARA VALLEY (2-900)**  
NORTH SANTA CLARA COUNTY (2-902)

WELL 751E-31A2, M.D.B.M.  
GROUND SURFACE ELEVATION 103'



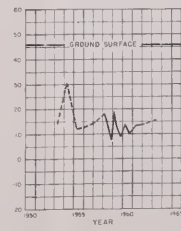
**LIVERMORE VALLEY (2-1000)**  
ALAMEDA COUNTY

WELL 351E-11H1, M.D.B.M.  
GROUND SURFACE ELEVATION 375'



**HALF MDON BAY TERRACE (2-2200)**  
SAN MATEO COUNTY

WELL 551W-29N1, M.D.B.M.  
GROUND SURFACE ELEVATION 48'



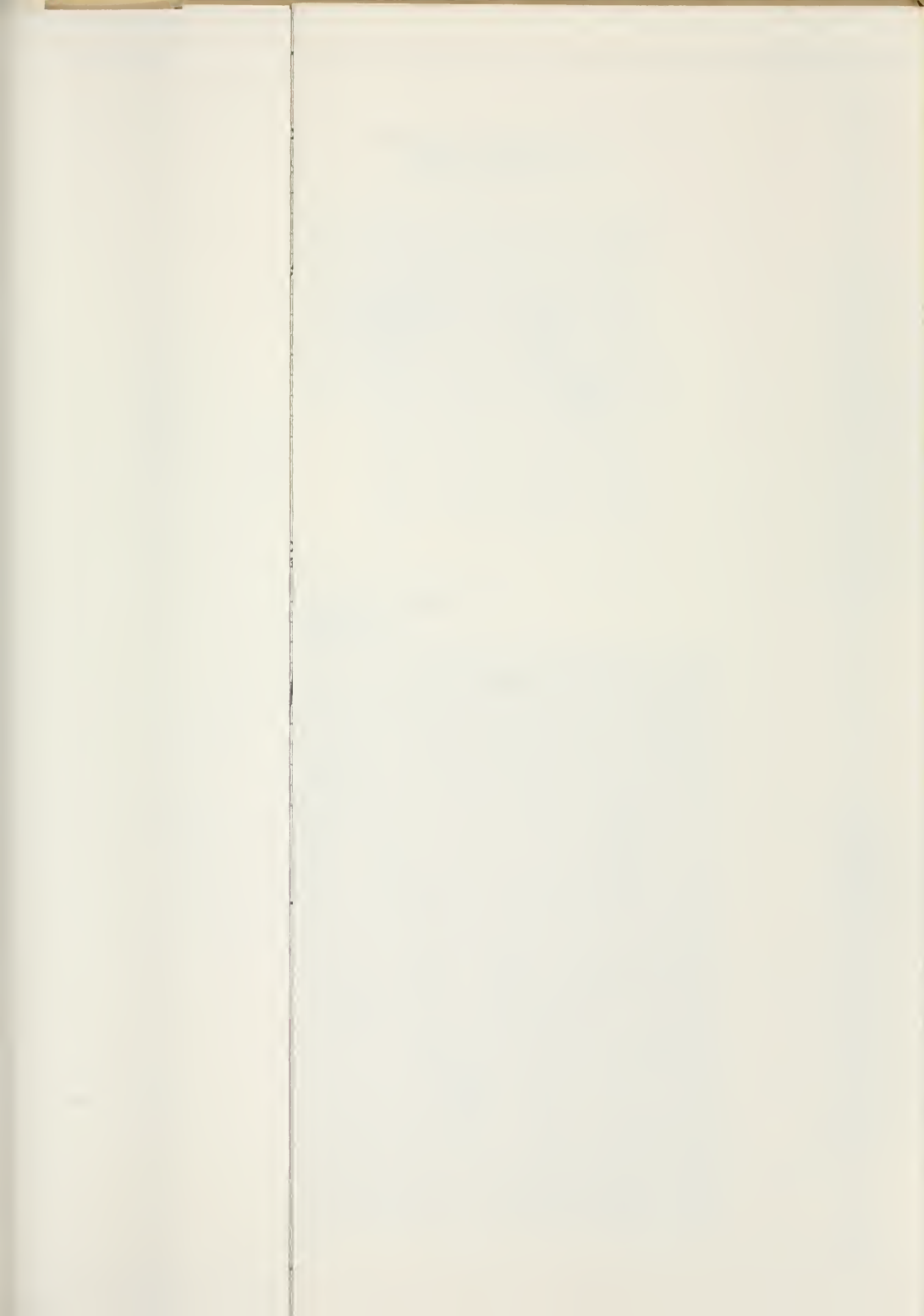
--- CONNECTS MEASUREMENTS MADE AT  
INTERVALS OF A YEAR OR MORE

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES  
BAY AREA BRANCH  
HYDROLOGIC DATA  
CENTRAL COASTAL AREA

FLUCTUATION OF WATER LEVEL  
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1963

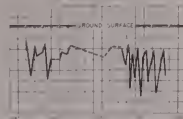
ELEVATION IN FEET - U.S.C.B.S. DATUM



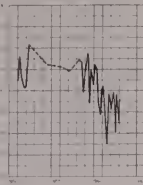




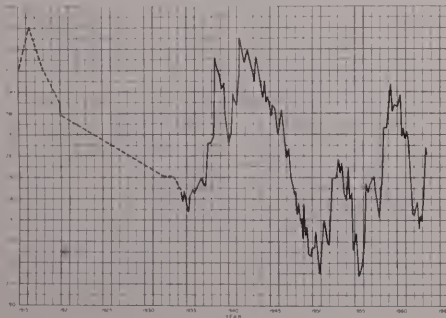
PAJARO VALLEY (3-200)  
MONTEREY COUNTY  
AT 100 FT. M.O.B.W.  
WELL 155/26-100 M.O.B.W.



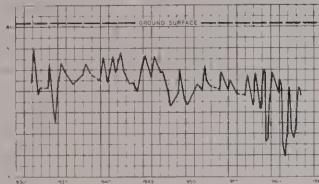
GILROY-HOLLISTER VALLEY (3-300)  
SAN BENITO COUNTY (3-302)  
WELL 175/51-27 M.O.B.W.  
WELL 175/51-27 M.O.B.W.



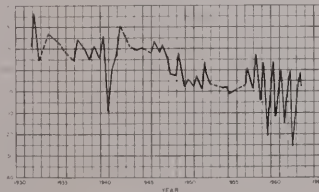
GILROY-HOLLISTER VALLEY (3-300)  
SOUTH SANTA CLARA VALLEY (3-301)  
WELL 175/51-27 M.O.B.W.  
WELL 175/51-27 M.O.B.W.



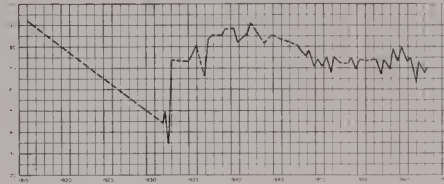
SALINAS VALLEY, MONTEREY COUNTY (3-400)  
PRESSURE AREA - 180 FOOT AQUIFER (3-401)  
WELL 175/51-27 M.O.B.W.  
WELL 175/51-27 M.O.B.W.



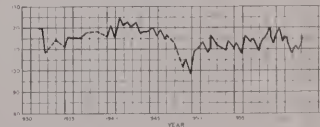
SALINAS VALLEY, MONTEREY COUNTY (3-400)  
PRESSURE AREA - 400 FOOT AQUIFER (3-401)  
WELL 175/51-27 M.O.B.W.  
WELL 175/51-27 M.O.B.W.



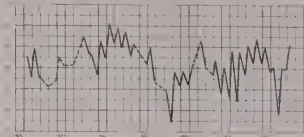
SALINAS VALLEY, MONTEREY COUNTY (3-400)  
EAST SIDE AREA (3-402)  
WELL 175/51-27 M.O.B.W.  
WELL 175/51-27 M.O.B.W.



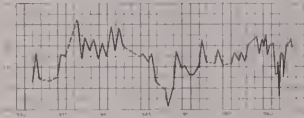
SALINAS VALLEY, MONTEREY COUNTY (3-400)  
FOREBAY AREA (3-403)  
WELL 175/51-27 M.O.B.W.  
WELL 175/51-27 M.O.B.W.



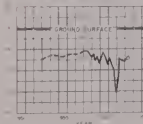
SALINAS VALLEY, MONTEREY COUNTY (3-400)  
ARROYO SECO CONE (3-404)  
AT 100 FT. M.O.B.W.  
WELL 175/51-27 M.O.B.W.



SALINAS VALLEY, MONTEREY COUNTY (3-400)  
UPPER VALLEY AREA (3-405)  
WELL 175/51-27 M.O.B.W.  
WELL 175/51-27 M.O.B.W.

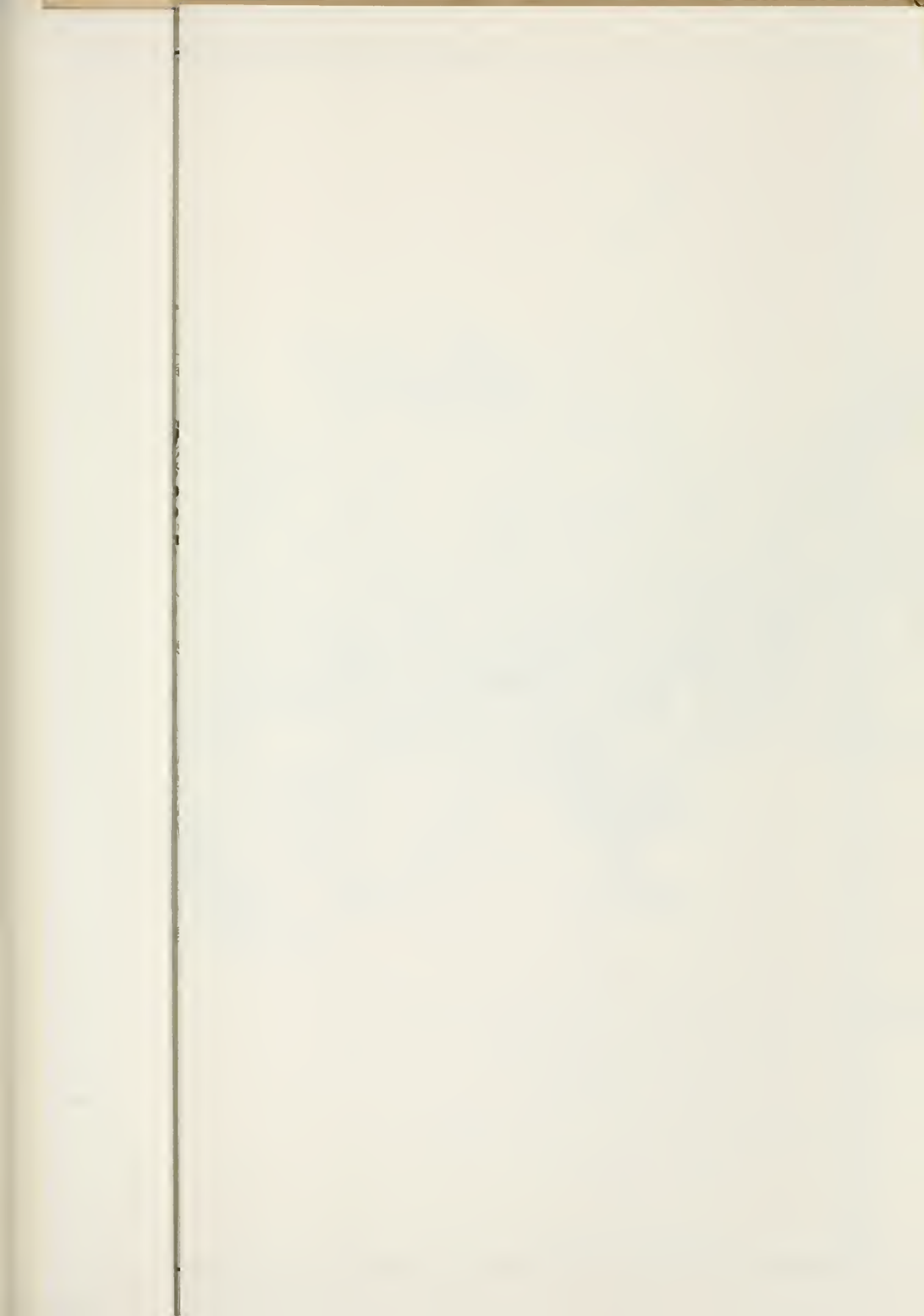


CARMEL VALLEY (3-700)  
MONTEREY COUNTY  
AT 100 FT. M.O.B.W.  
WELL 175/51-27 M.O.B.W.



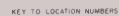
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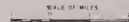
D	C	B	A
E	F	G	H
W	L	R	J
N	P	O	I

step 4: use data provided by Yousang,  
Mingge, Saeun, and Jih Eun to  
eq. 4th/5th. 22/21

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES  
BAY AREA BRANCH  
HYDROLOGIC DATA  
CENTRAL COASTAL AREA

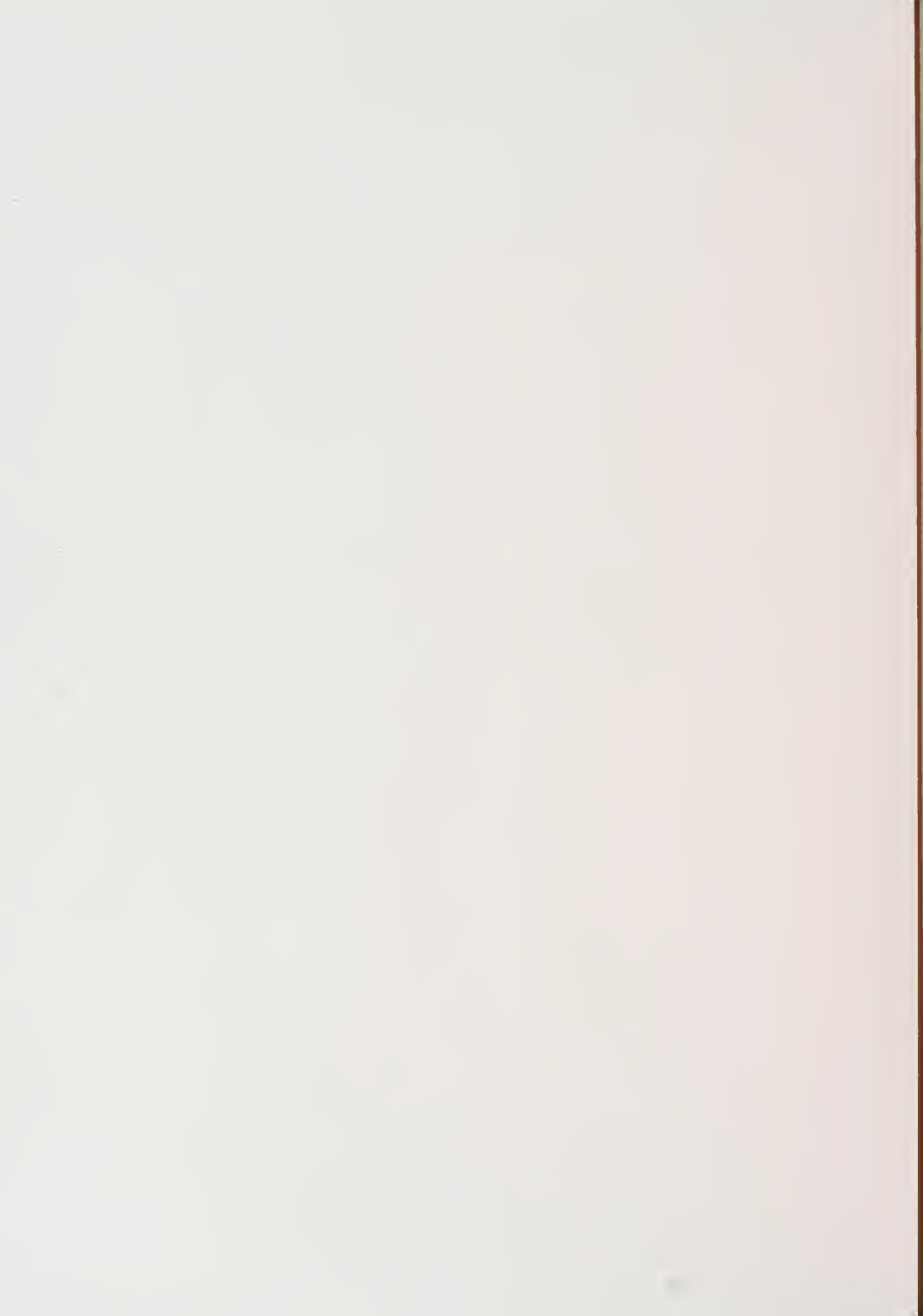
STATUS OF SEA-WATER INTRUSION  
SANTA CLARA VALLEY  
EAST BAY AREA  
1963

SCALE OF MILES











Foldout too large  
for digitization

May be added at a  
later date











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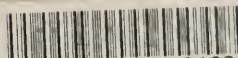
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